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DOMESTIC SCIENCE TEACHERS IN THE CAMPAIGN AGAINST TUBERCULOSIS.[1]

IRA S. WILE, M.S., M.D.
New York City.

What may the domestic science teacher do to further the campaign against tuberculosis? What may the public school teacher and the settlement teacher do in this connection? Can certain lessons be definitely planned for the discussion of this subject, and what facts would be safe to teach children?

This, in a vague way, represents the subject of our discussion. If there is a health problem, domestic science teachers should know its solution; the real difficulty is in teaching this solution to others. The problem is that we are dealing in algebraic manner with unknown quantities in our variety of children.

Health is as important as education. While there is considerable agitation about teaching children some vocation to enable them to earn money, there is little agitation about making them able to earn it. When the position of health in education is recognized fully, domestic science will be correlated with the work of the visiting nurse, the medical inspector, and the gymnastic director, into a department of school hygiene which at present seems a necessity. Domestic science involves the improvement of the home through the medium of the school. The settlement teacher reaches the home also but through the mother directly. It must not be forgotten that the mother is the manager of the home. The home is an index of the mother, and as teachers form child character with their ordinary A B C, so domestic science teachers determine, in part, the character of the home. What is done during the school years to protect health and to instruct regarding health? In one system of schools, for the

[1] Read before Home Economics Association of Greater New York, November 21, 1908.

first three years there is some informal talk on physiology and hygiene, and in the sixth year social hygiene is taught; but in these years health has not really been regarded as an object of education, although the need of health instruction, and especially as regards tuberculosis, cannot be gainsaid.

According to Prof. Ganghofner, in a series of eighteen hundred autopsies on children dying of diseases other than tuberculosis, he found in the children between the ages of four and six years, 26.9 % infected with tuberculosis; between the ages of four and six years, 26.8% infected with tuberculosis, and these represent percentages of tuberculosis infection where children did not develop a real tuberculous condition. Cornet has determined the mortality of tuberculosis under fifteen years to be 8.8% for males, and 10.4% for females. In Paris, Grancher found 15% of tuberculosis among 1426 children whom he examined. Sachs has well stated: "The increase in the frequency of tuberculosis, with the advance of age from childhood to adult life, makes it evident that eradication of tuberculosis from human life can never be accomplished unless the child first of all is protected from infection." Schlossman more positively has stated "A successful campaign against tuberculosis can be waged only if we prevent infection during childhood, for it is during this period of life in a great majority of cases that infection takes place, although the disease itself may not become manifest until later in life." A large percentage of the cases of tuberculosis in children is due to direct exposure to infection. Tuberculous parents, tuberculous relatives, tuberculous attendants, must be blamed for a large percentage of the infection of children with tuberculosis. It is a dire calamity that the invalid of the household is frequently the one to whom are entrusted the children, especially when the healthy adults are obliged to leave the home for employment; and it is to such sources of infection, rather than to the milk supplies, that we must attend in order to lessen the morbidity from tuberculosis. We must not lose sight of the fact that morbidity, is more important in considering social diseases than mortality because fully five persons are sick to one who dies. If Dr. Knopf be correct in calling a tuberculous predisposition "physiologic poverty," the problem of the prevention of tuberculosis in the public school system must be begun directly in the home. A child should not be forced to go to school, nor should

the domestic science teacher do aught to urge children of tuberculous parentage to remain in school, until they have reached the age of eight or nine years; and if such pleasant things as the "waldschule" exist, a special appeal should be made to the parents to permit the child to attend such an open air school in order to strengthen it and overcome its predisposition to tuberculosis. In investigating the relations of the industries of Worcester to tuberculosis, Getchell found that of each ten thousand cases of tuberculosis, 225 cases occurred among housewives and 66 cases among children and students. He states "If it shows anything, it emphasizes the belief that the disease implants itself in the home; that it develops most rapidly in those who lead a sedentary life; that it occurs more often in the unskilled workman who earns small wages and consequently cannot house and feed himself adequately."

In regard to the question of food, we have heard much discussion regarding breakfastless school in the City of New York. We know that Hunter has claimed that here are 60,000 to 70,000 school children in New York City, "who often arrive at school hungry, unfitted to do well the work required." I agree that, if education is compulsory, the school system should also require that children be compelled to be in proper condition to do their school work. But it is not a question of breakfast. We are well acquainted with the capricious appetites of children, with their tendency to get up late and bolt their food, or go to school without any, and we know that this is no more a characteristic of the children of poverty than of those who dwell in comfortable circumstances. We know that poor feeding, the giving of coffee and tea, poor ventilation, poor hygiene, no matter what the conditions may be, are large factors in regulating the important question of feeding children, and I largely feel that the answer to the problem is that it is one of misdirected feeding through ignorance, rather than under feeding through lack of means. When one pauses to consider that a standard diet for tuberculosis, worked out by Bardswell and Chapman, sufficient for the treatment of the average tuberculosis individual can be secured at a minimum cost of eight pence a day, we can appreciate that our attention to the economic problem of dietetics with relation to tuberculosis, has been exceedingly lacking.

With domestic science really teaching management of the home, the object of its work is to teach, instead of the three R's, the three H's—Health, Happiness, Home. The subject of physiology and hygiene contains much really belonging to domestic science, and in so far as the hygiene of the home is the collective effort resulting from individual hygiene, hygiene as it should be taught in the lower classes is distinctively a part of the work of domestic science.

The course of hygiene at present existing in our New York public schools is interesting. In the class 1A, there are talks on cleanliness and correct habits and the effects of alcohol and narcotics; in 2A, on dietetics, care of the teeth, effects of alcohol and narcotics. Not until grade 4A, is the need of pure air, ventilation, rest, sleep, care of the eyes, and care of the hair taught, but the effects of alcohol and narcotics is deemed necessary as the very first instruction in hygiene. It is apparently more important to teach our children that their parents are likely to be drunkards with hardened livers, because they have taken their daily glass of beer than to teach our children the need of having the windows open at night or to keep their hair well combed and nails well trimmed. It is far more important, apparently, that the children should learn the baneful effects of cigars and cigarettes at a tender age, than that they should know the necessity of play, correct posture and proper clothing. Tooth-brush classes instituted in 1A would be of far greater physical good to the children than informal talks on alcohol and narcotics. Unfortunately, I may say in passing, I am informed that the teaching of hygiene in the first few years of our public schools is so splendidly neglected that its value is greatly lessened. There is no doubt that the time to teach domestic science is when the law gives the children to the schools for education. Physical education should be compulsory. The idea of social health should be inculcated from the very beginning of the curriculum. Domestic science should be begun among the youngest of children where the death rate is the highest. People frequently advocate leaving the teaching of hygiene and its relation to home environment, entirely to the parents. But what does the average mother know of domestic science—these willing mothers who have been educated in the same school when even less attention was paid to hygiene? How much does

the foreign population, daily coming to our shores from rural districts in Europe, know of the hygiene relating to life in a large city?

I believe that the domestic science teachers should busy themselves to secure legislation that will at least make a beginning in the proper care of our children, at the very time that they enter the public schools. I believe that when each child is taken to school for the first time, the mother or father or guardian, should be given a card on the style of our present tuberculosis catechism, requesting co-operation in the efforts of a Department of School Hygiene to keep the child well during the period of school life, and suggesting in such a catechism the ground work in hygiene essential to the maintenance of a high standard of physical health. I believe that all cases of tuberculosis in households should be reported to the public school authorities, and those homes from which children go to the public schools should be investigated, and special attention given to the establishment of a correct mode of life on the part of the tuberculous individual, so as to prevent the infection of the children of the household. Do not mistake my intention—I do not wish to make tuberculosis the *bête noir* of child life. Make the maintenance of health the goal and that will involve sufficient of an attack upon tuberculosis. Do not aim to develop tuberculo-phobes or microbe-phobes or worriers. "The bacteria will catch you if you don't watch out," is a poor pedagogic method. Teach a child that there is sickness but do not instil a fear of it. Make health a paramount issue and base the rules of life on the necessity of keeping well. The child in the earliest grade can be taught the value of personal hygiene and social hygiene and the results to be obtained from each.

The problem of tuberculosis is divided into that of the prevention and the cure, and the domestic science teacher must give attention to both. Under the head of general prevention, she must give her attention to those things which will develop bodily vigor and lessen likelihood of infection. She must be able to counsel as regards breast-feeding, use of alcohol, the correction of physical deformities and proper diets at various ages. She must be able to authoritatively advise regarding cleaning and disinfection of homes previously occupied by tuberculous individuals. Sunshine, ventilation, creeping children, pacifiers and tasting of food by mothers, are all subjects within her province.

The milk supply, the water supply, sewage disposal, the contagiosity of coughs and colds and the segregation of tuberculous parents, are subjects of especial importance to her. It is not a question of teaching how to cook, but how to live. Nutrition depends first upon proper mastication, therefore dental supervision is within her province.

Thus far there has been established no ratio between the cost of food and the death rate from tuberculosis, but there is undoubtedly a ratio between the quality of the food and its quantity, and the death rate from tuberculosis. What the domestic science teacher aims to teach is the securing of the maximum nourishment at the lowest cost and with the greatest ease in preparation. You must necessarily be strongly anti-delicatessen. That domestic science course which first teaches about crullers, teas and candies, fails ignominiously at the very onset of its work, and I regret to say, that there are many such courses in the schools. What we should aim to do, is to teach our children how to live. Part of this, undoubtedly, comes from developing better cooks, still more however from developing economical cooks from whose savings will result better clothing and better housing. When our children leave the public schools to go to the stores and factories and homes, they should understand the necessity and the mode of securing all good foods, well prepared, at the cheapest price and with the utmost nourishment. Children should be taught that it is not a question of quantity of food but quality of food. The breakfastless children whom Hunter deplores, are no worse off than the cup-of-coffee children —than the bolted food children. The use of individual cups and eating utensils, the covering of foods when not in use, the danger of contamination by dust, the contagion that may be spread by flies and other insects, are questions of the greatest moment for the physical comfort of the home; and the ventilation of homes is a subject of no mean importance. The value of sunlight as a preserver of health in the home, could not be more fittingly expressed than by Dr. Derby of the Massachusetts Board of Health: "Let in the sunlight and never mind the carpets; better they should fade than the health of the family."

The domestic science teacher in the settlements presents a different problem, because her problem is largely to secure a few converts to the dicta of domestic science and then encourage the

converts to teach the many by example. For instance, there may be classes for children, for adults, for pregnant women and for mothers. The work is intensive, classes are small, there is a close personal relation, and there are no restrictions on the field of work. In school work, however, there are large classes, prescribed courses and a dire lack of personal attention. The classes for mothers, the classes for little mothers, the classes for children, all afford wonderful opportunities for raising the standard of living and improving the health and the homes of our children. Direct instruction, such as is given by model flats is of inestimable value. The Association of Practical Housekeeping Centers of New York City, declares that their particular objects are "for benevolent and educational purposes, to instruct by practical illustration and otherwise, people of the tenements in domestic science and in the art of home making."

I wish briefly to refer to a few institutions whose work along the lines of domestic science is of immense social importance. The St. Pancras Society in England, maintains a sewing class for pregnant women and gives instruction in the art of constructing cheap meals. They maintain a school for nursing mothers, and provide dinners for nursing mothers, at the same time teaching food values and baby culture. Health lectures and cooking lessons are given to the mothers with special reference to caring for the children. The English Bread and Food Reform League is an educational, purely non-commercial, non-political association, organized to direct attention to the great importance of the food question, and to promote through nutrition, the health of the people. "Without advocating any special system of diet, we may urge teaching the economic and nutritive value of such neglected staple foods as oatmeal, barley, wheatmeal, rice, maize, beets, beans and lentils, nuts, fresh and dried fruits, green and root vegetables, as their more general use would promote the health of all classes of society." The Ontario Women's Institutes were established in 1897 for the dissemination of knowledge relating to domestic economy, the economic and hygenic values of food, clothing and fuel, a more scientific training of children with a view to raising the general standard of the health and morals of the people; in short, the discussion of all subjects which tend to the betterment of home conditions. The Health Education League of Boston is endeavoring to spread

the knowledge of the laws of health among the people through the circulation of sound, popular health literature. The Irish Women's Health Association, under the Countess Aberdeen, seeks to provide nourishing food, teach cleanliness and ventilation, bathing, the buying and preparation of food, the maintenance of pure foods through a system of food instruction, and so forth. A most practical method of combating tuberculosis through domestic science, has been adopted by the Association for Improving the Condition of the Poor, of New York City, which has added to its staff a visiting teacher of foods and cooking. This dietitian is to teach mothers how to secure adequate nourishment for large families from small stipends. Families who were being provided with inadequate nourishment at $1.00 to $1.25 per day, are being taught how to live, and to live well, on 70c to 75c per day; and the standard of health of such families will be raised.

Instruction in hygiene, instruction in home improvement, protection of children from their unhygienic elders, is coming more and more to occupy a prominent position among the subjects of social discussion. No class of people can be more efficient in considering the large problem of tuberculosis than the domestic science teachers in this country. To mould public opinion, however, so as to overcome the various fetishes we daily worship, an efficient organization is necessary. The individual opinion of the domestic science teacher may be scorned, held in contempt, derided, but the united opinion of an intelligent organization pursuing a scientific policy for the social betterment of the community, will have an awakening effect upon a somewhat lethargic public conscience.

Columbia University has been giving a series of lectures twice a week during February, March and April on Sanitary Science and Public Health. The project looks to the ultimate organization of a School of Sanitary Science. Typical lectures in the present series were as follows: March 3, Public Health Problems of the Municipality, by Thomas Darlington, M.D., President and Commissioner New York City Health Department; March 10, Public Health Problems of the State, by Eugene H. Porter, A.M., M.D., Commissioner of Health of the State of New York; April 12, Diseases of Animals Transmissible to Man. The Relation of Insects to Disease, by Theobold Smith, M.D., LL.D., Fabyan Professor of Comparative Pathology, Harvard University; April 26, Visiting Nursing and its Influence on the Prevention of Disease, by Richard Clarke Cabot, M.D., Instructor in Clinical Medicine, Harvard University.

TYPHOID FEVER—INFECTION AND PREVENTION.

MRS. MARY HINMAN ABEL.
Baltimore, Maryland.

The weekly death record of any town or city will show that typhoid fever as a cause, is always present, and at times the number of its victims rival those of the grim leaders of the column, pneumonia and tuberculosis.

In the United States, 35,000 people die every year from typhoid fever, a frightful record for a preventable disease; for so wholly preventable has it proved to be, that it ought to become, as some physicians have said, as rare a disease as small pox. Time was when typhoid fever was thought to be carried in the air, to "emanate" in various obscure and untraceable ways, and there was talk of "sporadic" cases, but it is now well known to be carried by a living organism called the typhoid bacillus which is taken into the body through the mouth. These germs are voided in great numbers in the excreta of the patient, not only during the attack, but for a varying length of time after apparent recovery. They remain active for a long time, even as long as six months in a soil containing nitrates, and by finding their way into food and drink they set up the disease in other individuals. Only in this way or by infected hands or utensils coming in contact with the mouth, is the disease communicated. The typhoid germ is very widely distributed and the number of cases would be greater than it is, were it not that many indivicuals seem not to be susceptible to it. The old and the very young are almost exempt, the tendency to it being greatest among those who are between fifteen and thirty years of age. To quote Dr. Osler, "The fairest of our sons and daughters * * * are offered to our Minotaur; this to our shame, we do with full knowledge and with an easy complacency that only years of sinning can give."

Water as a Carrier of Typhoid.

In 322 American cities in 1905, the number of deaths from typhoid fever averaged 34 per 100,000 inhabitants. At the same time, the average taken from 10 European cities, was 11 per 100,000; the comparison being of value, simply because the

great European cities obtain their water from filtration plants or from pure mountain streams, lakes or rivers, while the water supply of our own cities is in most cases subject to the pollution of densely populated suburban districts. There have been sudden dramatic outbursts of the disease, affecting as high as 10 % of the population and due to an accidental pollution of a water supply generally considered good; such was the epidemic that occurred at Ithaca, New York, some years ago. Most of the water-borne typhoid, however, is due to the constant contamination of the water supply by leaking sewer pipes and cess-pools. Unless the water of a town is known to be above suspicion, there is no positive safety in drinking what has not been boiled.

Milk as a Source of Infection.

Water is a mere passive carrier of germs, but a medium in which the typhoid bacillus can grow and multiply is an active agent of great danger. Milk is such a medium and it is responsible undoubtedly for more cases of this disease than is any other food.

Let us suppose that an employee on a dairy farm has been on a journey and has drunk typhoid infected water. In due time he is taken ill; if very ill a doctor is called, who, if he makes a correct diagnosis, notifies the health board immediately and the milk of the dairy is retired from circulation, (to use a library phrase) until the farm can show a clean bill of health. But suppose on the other hand that the man has but a slight rise in temperature, that he is indisposed rather than really ill, and quite able to attend to his work. These light cases, sometimes called "walking typhoid" are probably most dangerous of all. From lack of cleanly habits and especially from neglect of the scrupulous washing of hands before milking or touching any milk utensils, this person may directly plant typhoid germs in milk pail, strainers and pan. In this good culture ground, they multiply enormously and within a few weeks, a number of cases of the disease have developed along the milk route served by this dairy. More frequently, perhaps, the milk is infected by one who has not the disease but who is nursing a typhoid patient. In a number of cases on record, the patient has been cared for in the very room in which the milk was strained and bottled for market.

Or, the infection may have been indirect. The dejecta of a patient having been thrown out on the ground, the contained germs reach the water supply and the cans and bottles washed in this infected water may thus start the disease. Were doctors and trained nurses running this dairy farm, they would be able by the use of the stringent antiseptic methods in which they have been trained, to avoid infecting the milk, even though patients were being nursed in the same building. But considering the fact that the average individual wholly lacks such exact training, health boards are wise in forbidding the delivery of milk to the general public from a farm on which a case of infectious disease exists.

Unless the source of milk is known and a competent veterinarian has declared the herd to be without disease, there is no safety in the use of raw milk

The Typhoid "Carrier."

Among the causes of typhoid fever only recently brought to light, must be reckoned "the typhoid carrier," the person who continues to harbor the germ long after apparent recovery and who is a menance to the health of any household, especially if in charge of the preparation of food. More and more of these cases are being discovered. Dr. Howard tells of four cases reported in an English town in a few months. In one of our own cities an institution containing nearly a hundred members, suffered for a year from outbreaks of the disease and the cause remained a mystery until a "carrier was found in the kitchen.

May not this new and startling proof of the necessity of guarding the food supply, help to public recognition of the fact that the preparation of food is, in a new sense, to be classed among the "dangerous occupations," so that a cook may yet be required to carry a certificate stating that she suffers from no communicable disease?

The Typhoid Fly.

This is the new name proposed for the *musca domestica*, or common house fly, by Dr. L. O. Howard, Chief of the Bureau of Entomology in Washington. He urges the adoption of this name "in order to call direct attention to the danger of allowing it to continue to breed unchecked." Every cleanly housekeeper

hates a fly, and her instinctive dislike for unbidden guests of foul origin and habits, seems to be more than justified by the results of scientific enquiry. The fly has been made to walk across the sterile gelatine plate and has left tracks that reveal to the microscope what it fetches and carries. It was ten years ago at the time of the Cuban War that we began our real acquaintance with the fly and all its works. In the summer of 1898, the United States troops, en route to Cuba, were stationed at various camps in the South Atlantic States, and every camp in less than eight weeks was attacked with typhoid fever. The number of cases rapidly increased until about 20% of the soldiers had developed the disease, and of the total deaths in the army during the war, typhoid fever furnished 86%. It was found that the hygiene of the camps had been shamefully neglected, that offensive uncovered sinks, or pits, were in close proximity to the tents and, to quote from the official report, "Flies swarmed over infected fecal matter in the pits and then visited and fed upon the food prepared for the soldiers in the mess tents. In some instances where lime had been recently sprinkled over the contents of the pits, flies with their feet whitened wtih lime were seen walking over the food." To quote further: "Flies were undoubtedly the most active agents in the spread of typhoid fever."

The epidemic of typhoid fever in Chicago in 1902, again fixed guilt upon the fly. Flies caught in undrained closets, on fences and in the room of a patient, were found by the bacteriologist to carry the bacillus on their feet.

Flies undoubtedly carry infection to milk. An observer describes flies as settling in a black mass on the cream separators. Now, if in this case, they had been feeding on the dejecta of a typhoid patient, they could have infected enough milk to start one of these outbreaks of the disease that have become famous in medical literature. Not only do flies carry infection on their feet, but there have frequently been found in the speck living organisms capable of setting up disease.

The evidence against the fly is rapidly growing. Dr. Howard, whose researches have done much to throw light on the relation of this insect to the spread of disease, holds that the fly, at least under city conditions, must assume third rank as a typhoid "carrier"; that is, next to water and milk.

Dr. Daniel D. Jackson of the New York City Water Board, in his report of December, 1907, to the Committee of the Merchants' Association on Pollution, showed the relation of deaths from intestinal diseases, to the activity and prevalence of the common house fly; the plotted curve rising above normal at the same time at which flies become prevalent, culminated at the same high point and fell off with slight lag at the time of the gradual falling off of the prevalence of the insect. Last year similar studies were made in the city of Washington which seem to show that flies are responsible for the great increase of typhoid in the late summer. The expensive filtration plant installed in that city some years ago was expected to decrease the number of typhoid cases by 75%, but it has failed to do so during the summer months.

The campaign against the fly is already well organized. Its breeding places must be the first place of attack. It breeds preferably in horse manure, the vast majority of flies that are found in city and country, coming from this source. It also breeds in human excrement and in fermenting vegetable and animal material.

To quote Dr. Howard: "With the careful collection of garbage in cans and their frequent removal, with the proper regulation of abattoirs, * * * and of stables in which horses are kept, the typhoid fly will become a rare insect." We are told, however, that it is too much to hope that in the near future the country districts will be relieved from the curse of flies, but much can be accomplished on any individual farm by placing the manure daily in a specially constructed water tight and screened pit or other receptacle, and keeping it well screened until it is placed on the land. This has been found to be cheaper and more effective as a method than the treatment with lime, petroleum or any other agent. Meanwhile, careful screening of doors and windows, supplemented with use of fly paper, will keep flies from food. A fly that falls into the milk will surely leave behind some of the six million or more bacteria of different varieties with which the tiny body is loaded.

Raw Vegetables and Fruit.

Typhoid fever is also carried by vegetables that are raised in regions where night soil is used for fertilizing. If these vege-

tables are eaten raw, the greatest care must be used in their repeated cleansing in water that has been well boiled. Raw fruit has been known to carry infection, doubtless through filthy handling. All fruit should be well washed, dates and figs scalded and the peelings of fruit should not be eaten.

Another source is found in the eating of raw oysters that have been "fattened" or swollen in fresh or brackish water, in most cases the sewage-infected outlet of streams. The traffic in fattened oysters should be forbidden by law, thus removing all danger in eating this delicious bivalve, for oysters in their natural beds are wholesome and free from contamination in the vast majority of cases.

Considering what is now known of the methods by which typhoid fever is conveyed, what is the duty of housekeepers, teachers and individuals? Says one health officer: "Boil the water, steam the milk, keep out the flies." But we have also our duty to those who, from poverty or ignorance, will not take these precautions.

If the water supply is to be above suspicion and milk inspection thorough, sufficient funds must be furnished to the city engineer and to the health department, and then it must be honestly spent. Into this side of the question we cannot enter. When the average citizen knows what he wants in this line, he will get it.

On this account, and for immediate personal reasons, the general public must have more practical instruction concerning infectious diseases and their prevention. This is to be brought about by the press, by lectures, by placards and health tracts and by instruction to small groups, as is already given by the members of such organizations as the Instructive Visiting Nurses Association. The two points of greatest importance are, the proper disposal of human excreta in supposed health as well as in sickness, and the acquiring of better personal habits as to cleanliness.

Wherefore do ye spend money for that which is not bread, and your labor for that which satisfieth not?—Isaiah, iv. 2.

Preserve and treat food as you would your body, remembering that in time food will be your body.—B. W. RICHARDSON.

"The palate is the janitor, and unless he is conciliated, the most nutritious food will find no welcome."

CALEB TICKNOR, M. D., 1805-1840
Author of The Philosophy of Living, 1836.
From an ivory miniature owned by Miss Grace Warner, Salisbury, Conn.

CALEB TICKNOR, AN EARLY AMERICAN WRITER ON NUTRITION, 1805–1840.

C. F. LANGWORTHY.
U. S. Department of Agriculture.

Caleb Ticknor was born in 1805, in Salisbury, Connecticut, and died in 1840 in New York City. He was one of the early American writers who interested himself in the subject of human nutrition. Doctor Ticknor was graduated from the Medical Department of the University of Pennsylvania in 1829 and submitted as his thesis for the doctor's degree an article on "The Influence of Diet, Dress and Amusement upon Health." This material was later expanded into a book dealing with the same general subject. Doctor Ticknor's discussions are very interesting and are characterized by keen insight and good judgment. Many of his general statements are applicable to present day conditions.

The title page of Ticknor's thesis was as follows: "An Inaugural Essay on the Influence of Diet, Dress and Amusements Upon Health; For the Degree of Doctor of Medicine in the University of Pennsylvania by Caleb Ticknor, Salisbury, Connecticut, January, 1829." The thesis is endorsed: "Passed, March 5, 1829," and "ad cund of Westown School of N. York." The following quotations are taken from the thesis, the first from the preface:

"The medical faculty are entrusted with the lives and health of their fellow creatures, and are responsible for the faithful discharge of duties devolving upon them as guardians of the public health.

"The object of the profession is to cure and prevent disease; and since this is the case, the attainment of so laudauble an end ought in no wise to be defeated, by neglecting to censure the follies of gay and thoughtless youth, as well as to correct the errors of those of a more mature age. The influence of physicians in society is more or less extensive, and should be exerted to the utmost in the promotion of health and happiness, by reforming error, reproving folly, and discountenancing vice and immorality.

"We shall proceed, without further prefatory remarks, to consider, in a cursory manner, the influence of diet, dress and amusements, upon the health of the present generation.

After this introduction the section on diet follows and practically all of this is quoted.

"No one cause of disease produces effects more injurious or extensive than unwholesome or improper diet. An article of food, if used without discretion may be productive of disease; whilst, taken properly, it may add strength and vigor to the constitution; or it may produce unpleasant or injurious effects in one person, whilst in another it may prove altogether innocuous, or rather wholesome and nourishing. These effects of diet, so discrepant in different individuals, or in the same individual at different times, depend, in part, on idiosyncrasy, in part on the state of the system, but most of all, on the distorted and unnatural character of whatever is served up in the shape of food.

"The intention of the Creator was, evidently, that man should derive his means of subsistence from the animal as well as vegetable kingdom; this we infer from the structure of the human frame, besides having direct proof of it in revelation. The more simple are the articles of nourishment, the more do they contribute to health, comfort, and longevity. In support of this proposition we have but to look back at the antediluvians, and contemplate the instances of extreme old age there to be met with. Society was then in a simple state; and refinement, with the Hydra-headed monster Luxury, had not yet made its appearance. When the wickedness of man became great upon the earth, human life was shortened[1]. 'Pres au deluge se rangent le decroissement de la vie humaine; le changement dans le vivre, et une nouvelle nourriture substituee aux fruits de la terre.' The mode of living among the aborigines of our country goes, also, to show the salutary tendency of simplicity in diet—their meat being the flesh of animals killed in the chase, or fish taken from lakes and rivers, whilst their sole drink is the only beverage provided for man by the hand of Nature. Where do we find a people that can equal these children of the wilderness in enduring hunger and thirst, cold and heat, or excessive fatigue in any undertaking.? But mark the change in their physical as well as moral nature, on the introduction of the habits of the white man, unless Christianity, at the same time, diffuse its benign influence among them.

"To draw proofs from those a little more nearly related to ourselves, we find none better suited to our purpose than the Pil-

[1] Bossuet—L'histoire universelle.

grims, the ancient settlers of New England. Correct, and even rigid, in their habits of morality, and compelled to subsist on the most homely fare, and accustomed to vigorous exercise, they enjoyed that health and energy, both of body and mind, which their degenerate offspring, at this day, little dream of. Were we to seek for evidence still stronger, we have but to bring the subject directly home, and contrast the two classes found among ourselves; to wit, the rich and the poor. The rich use that diet which may be chosen by a capricious appetite, or which fancy may dictate, while the poor use that which may be demanded by nature or which circumstances allow. The countenance of a person will, at a mere glance, indicate to which class he belongs, as well as point out the degree of health and constitutional vigor that he enjoys. The indigent but temperate laborer has the glow of health upon his cheek, while the wealthy and luxurious has, generally speaking, an artificial freshness of countenance, or a complexion faded and sallow. It does not follow as a necessary consequence ,that, because a man is rich he must be a glutton or wine-bibber—but 'man is the creature of circumstances,' and those who have it in their power to often yield themselves up to the indulgence of every wayward appetite and passion.

"The diet of the two sexes is different, and so are the diseases to which each sex is obnoxious. Many among the male sex are accustomed to taking in no very small quantity, solid food of different dishes highly spiced, and agreeably flavored, that the pleasures of the taste may be prolonged after the demands of hunger are satisfied. The overloaded stomach now requires aid in digesting its contents; and brandy or wine, or both, are taken, as being the best solvents of this heterogeneous compound—or rather, as being *stimulants* most appropriate to the case. Such delicate and complicated organs as are concerned in the process of digestion cannot long endure the preter-natural task imposed on them, and the constant goading and stimulating to which they are subject. As a consequence of this mode of living, engorgement of some vital organ, or a low degree of inflammation of some one viscus, is, sooner or later, sure to ensue—hence, a host of diseases, well known in this civilized and enlightened age under the names of gout, dyspepsia, dropsy, etc.

"The diet of females unlike that of the other sex, consists in a great measure of pastry, sweetmeats, and other articles of this class, than which nothing taken into the stomach is more indigestible or less nutritive; and this is more especially true if the constitution be feeble and delicate. The sedentary life of most females predisposed them to numerous complaints peculiar to the sex; and the diet of which they make use tends to excite some of these complaints into action, while it increases the susceptibility of the system to others. Their drinks too are relaxing and debilitating, and as unwholesome as their food; hot tea and coffee being their principal beverages. Thus, instead of a rosy cheek and laughing lip, among the *sisterhood*, we find a countenance sorrowful and wearing the paleness of the lily.

"Every country and every clime have been ransacked for something that may please the dainty palates of our modern epicureans. The daily and most common meals of the great majority of people of this day, are composed of the products of different quarters of the globe. Nearly every article of our diet is artificial, both of food and drink. The ingenuity of man has been tortured to discover some new product, or some new combination, that might gratify a fastidious appetite. Our most delicious fruits, and even our most valuable and nutritious grains, have been made to yield an intoxicating liquor—a poison that has destroyed countless thousands, and a curse nearly as grievous and almost as much to be dreaded by our happy country, as were, in ancient times, the plagues to be feared by Egypt."

Sections on dress and amusements follow the section on diet but as they are of less interest to students of nutrition they have not been copied. The original manuscript of Ticknor's thesis is bound up in the University of Pennsylvania collections in Thesis, Vol. 49. So far as can be learned, the thesis, or, as it might more properly be called, essay,for it reports no original work, was never published. It was, however, expanded into Ticknor's book on "The Philosophy of Living," published by Harper and Brothers in 1836, but which, as the author states, was mostly written in the early part of 1834. Some quotations from the volume follow, the first being from the general introduction.

"On investigation it is found that the great amount of discontent, unhappiness, disease, and misery, is owing to an im-

proper or unwise use of the good things of this world. A bountiful Providence has bestowed upon his creatures multitudes of blessings and luxuries to gratify both taste and sense, and as long as they are enjoyed in the spirit of true philosophy, they will contribute to our health, comfort, and happiness. But here lies the error—men do not rightly consider to what extent indulgence may be carried, consistently with their well being or that of those upon whom their example may have an influence. . . Our fellowmen are not altogether in blame, neither are they altogether excusable, for not acting more in obedience to reason and the requirements of nature. They are not well enough acquainted with the laws of their organization and the wants of the system to act, in all cases, in conformity, thereto; yet, with the exercise of what knowledge they have, and the right use of reason, many of the miseries under which they now groan might be averted. To aid them in acquiring the necessary information, as well as to assist in its application, is the object of the following pages.

"If it is true that it is good for 'a man to eat and drink, and enjoy the good of his labour,' two inferences may be drawn from the proposition which are equally true: first, that enjoyment is incompatible with excess of indulgence; and, second, that abstinence from the good creatures given us is throwing away, and voluntarily placing beyond our reach, the means of a rational and innocent enjoyment.

"Indulgence in eating is known by all medical men to be a fruitful source of disease; and not only members of the medical profession, but others have speculated to great extent on the question as to what is the most proper food for man. By some, animal food has been condemned, and a vegetable diet recommended as the only kind fit for rational man; and even at this day there are those who advocate a return to the simple and wholesome fare of the patriarchs. Were we placed in circumstances parallel to those under which the patriarchs lived, there would be more reason in urging us to adopt their mode of life. . . Much credit is due to those benevolent individuals and associations whose object is the reformation and improvement of our species; but it may be feared lest, by aiming at too much, at almost perfection, they may ultimately fail of even moderate success. Now, if we cannot accomplish all the good that is desirable, and if we are likely to fail of any by attempting too much, it is wisdom to let our efforts be more limited. . .

"The subject of diet has of late been much hackneyed; books have been written on digestion and indigestion, and the public have been drilled and lectured, till no doubt they are sufficiently wearied. Every article of food or drink has in its turn been alternately praised and condemned, so that if, on the one hand, we were to eat as we are advised, we should be surfeited, and on the other, were we to abstain from those articles condemned and prohibited by some one, we should die of sheer hunger. Let us therefore consider the influence which diet has upon the health and happiness of man; and if we divest ourselves of prejudice in favour of either vegetable or animal food, or the bran bread and cold water system, we shall be the more likely to arrive at a legitimate conclusion. . .

Under the heading "Aliment or Food" Ticknor gives the definition of food which is essentially similar to the definition in most of the text-books now in use except that no reference is made to the energy value of food. This is of course what would be expected as the theories of body energetics had not been formulated in 1834. Ticknor also fails to give the real value to ash constituents.

"By aliment, or food, is meant those substances which when taken into the stomach nourish the body, sustain it in its growth and development, and repair its losses. Anything, therefore, incapable of doing this is not an aliment. Organic substances alone constitute aliments, and it is, consequently, derived exclusively from vegetables and animals. Substances most commonly employed as food do not consist entirely of aliment, but combined with the nutritious principles are others of a harmless or deleterious character, over which the digestive organs have little or no influence. Aliment is not the same for all animals. Some can subsist alone on vegetables, and are therefore called herbivorous; others again can live only on animal food, and are called carnivorous; while some again, among which is man, can be supported, on either, and are styled omnivorous.

"The preparation of food influences, its qualities and the actions it excites in the economy. The art of cookery, though unattended to by physicians, is almost as much a branch of medicine as pharmacy, and nearly as important in the management of diseases. The object of cookery should be to render food digestible, to diminish the labour of the stomach, to present the

nutritive principles as much divested as possible of extraneous matter, to destroy its injurious properties, and to adapt it, in the preparation of dishes, to the powers of the digestive organs, the individual temperament, the predisposition to disease, or disease actually existing. The prolongation of life and enjoyment of health are more immediately dependent on good cookery than on medicine. Health cannot be long maintained where there is a bad kitchen. The perversion of cookery converts the art to a flattery of the palate, instead of an assistant of the stomach, and by leading to an excessive repletion generates gout, rheumatism, and disposes to apoplexy and other affections. . .

"The food that is proper to nourish a child, cannot sustain a man at hard labour. Every farmer knows that his horses will live, thrive, and even grow fat on grass alone; but he knows very well, too, that with much work or driving, they would soon wear out and die, were it not for the grain that he is obliged to feed them. Animal life is much the same, whether it be in man or in a horse; and the same principles that are applicable to the one, are equally applicable to the other. . ."

In the section "Vegetable Versus Animal Diet" Ticknor discusses among other things the question of coarse bread in comparison with ordinary flour, a topic which was of special interest at the time owing to the theories advocated by Graham.

"The advocates of both vegetable and animal diet believe, or affect to believe, their arguments conclusive, because they are drawn from their own individual experience; rice and hominy, or brown bread, suit one man, and therefore, rice and hominy, or brown bread, must be the only proper food for everybody. Or another finds that beef steak and ship biscuit agree the best with him, and therefore everybody should eat nothing but beef steak and ship biscuit. This kind of reasoning is equally false and puerile, and should make no impression on a philosophic mind; for by such logic we can prove that every article of food is both good and bad.

"When two cases are in all points exactly parallel, then what may be proper for one will be also proper for the other; but such cases are seldom to be met with: individuals differ in so many respects that the old proverb is strictly true, 'What is food for one is poison to another.' Unfortunately for the advocates of an exclusive diet, they have all, or nearly all, been confirmed

dyspeptics or hypochondriacs; and it is not often that what is suitable for a sick man will be proper for one in health. The writer does not, therefore, address himself particularly to invalids; he comes as a friend to those who are enjoying health, and wish still to enjoy it, and with it some at least, of the blessings which a generous Benefactor has bestowed upon them.

"It is said that in a 'multitude of counsellors there is safety;' but it often happens that in the contrariety of their counsel an ordinary mind is so bewildered and confused that it is almost impossible to come to any conclusion. . .

"Retrenchment and self-mortification seem to be the order of the day in relation to food and drink; there being no virtue, on the principle of radicalism,which does not consist in going counter to the appetites and instincts of nature. 'Let us be temperate in our meats and drinks,' says one, 'and use the world as not abusing it.' 'No,' says another; 'but let us rather eat no meat while the world stands, and as to drink, let that be cold water.'" Such sentiments have been put forth on the subject of diet, and such ultra measures urged, that the very injury is caused which is attempted to be averted—to wit, ill health and consequent unhappiness. . .

"Cornaro is the standard nowadays—the mirror by which every man's nature is to be reflected—the great exemplar which every man is to imitate. Lewis Cornaro was a Venetian nobleman, who, by dissipation and debauchery at an early age, ruined his health and broke down his constitution; but by the advice of his physicians, he reduced his diet to twelve ounces of solid food, and about a pint of wine per day. This change had a most happy effect upon the debauchee, as it has at the present day, and will ever have on all who undermine their health and the strength of their system by the same course of vice and dissipation. Cornaro lived to be almost a hundred years old, and the conclusion is, by those who use the scales and weights, that everybody should live as Cornaro lived after he reformed—and so, indeed, they should, if they had previously lived as he did, with the same unhappy effect upon their health. This mode of reasoning is but taking the exception for the rule itself; and by it we may prove anything, and make of a single isolated fact a general principle, universal in its application. Red Jacket, the famous chief of the Seneca Indians, lived chiefly, as the other natives of the

forest do, on game, and exposed to all the vicissitudes and inclemencies of our variable climate. He attained almost as great an age as Cornaro did, and yet, during the last fifty years of his life, he was almost daily intoxicated. Does this prove that we must imitate Red Jacket, in order to live to a good old age? By such reasoning, I again say, we can prove anything, however absurd. . .

"There is a lack of philosophy and reason in attempting to prove, by a few rare examples, that either vegetable or animal food is to be used to the entire exclusion of the other. . .

"For the edification of those who believe bran bread to be a modern invention, I can barely state, that for the space of three hundred years, the ancient Romans ate bread made of none other than unbolted flour. We find this same bread recommended for invalids by Tyron, a writer in the reign of William and Mary; and since his day, it has been universally recommended by all medical writers and practitioners, for a certain class of patients, even down to the time of our own Mr. Graham. . .

"The hull, or bran, of wheat, contains little or no nutriment, and all the good it ever does, is by its mechanical irritation, in costive habits, to keep up a regular action of the alimentary canal—while, in cases of an opposite nature, it is positively injurious; and he who would recommend it to patients, suffering from an already excited state of the digestive organs, would show himself fit to become the inmate of a madhouse. If any man, in the possession of his health and senses, prefers bread made of unbolted flour to any other, he runs no risk of being injured by indulging in such luxury—to the invalid I have only to say, . . . consult your physician."

Columbia University, in co-operation with Cooper Union, has been conducting in the Great Hall of Cooper Union, New York a series of lectures, the "Hewitt Lectures, The Chemistry of Digestion," by William J. Gies, M.S., Ph.D., Professor of Biological Chemistry in Columbia University. The subjects were: Food: Biological and chemical qualities; Digestion from general standpoints; Digestion in the mouth; Digestion in the stomach; Digestion in the intestines; The utilization, by the body, of the products of digestion; Bacteria and their influence on digestion, in health and disease; and Digestion and nutrition as modified by special influences, and in disease. The lectures were appropriately illustrated with stereopticon views and zeotrope figures and there were numerous chemical and digestive demonstrations.

BRILLAT-SAVARIN'S "PHYSIOLOGY OF TASTE."

CLYDE FURST.
New York City.

"The Physiology of Taste,[2]" by Anthelme Brillat-Savarin, Paris, 1825, is one of the classics of home economics.

Brillat-Savarin lived from the first half of the eighteenth century through the first quarter of the nineteenth, first as mayor of his native town in France; then, during the revolution an exile in Switzerland and in America; and, finally, during the last third of his life, a judge in Paris of the highest national court. The fame of his professional wisdom and justice was great, but that of his personal benevolence and geniality far greater. The choicest flavor and charm of many years of social life he preserved in the book he apparently intended to leave, at his death, as a legacy of good cheer to his friends. The record of his love of good living was to serve him, a bachelor, as a posterity.

His fears that so genial a production might seem inconsistent with his judicial dignity were overcome by arguments which are given in a prefatory dialogue, and the volume was published anonymously in 1825, a year before his death. Even in so short a time the book was crowned with extraordinary popularity. In addition to the Prefatory Dialogue and a series of Fundamental Truths, the little volume includes a Preface, thirty "Meditations" or chapters, and, in conclusion, a dozen narrative and descriptive "Varieties" bearing upon the subject. The whole amounts to less than three hundred small pages.

The earlier chapters, on the senses, the sense of taste, appetite, and thirst, are largely physiological or psychological, but even here the author carries out with charm his intention of touching but lightly subjects likely to be dull; he always practices the preaching of the mad poet Blake, "To particularize is the great distinction of merit," and everywhere he introduces "original anecdotes, witticisms, and similar side-dishes." Although Savarin separates the functions of taste into direct, complete, and reflective, he finds himself unable to classify its results

[1]Published by arrangement with the *New York Evening Post*.

[2]The title page of the third edition reads: Physiologie du Goût, ou, Méditations de Gastronomie Transcendents, par un Professeur, membre de pluseurs sociétés savantes. A. Sautelet et Cie, éditeurs, Paris, 1829.

BRILLAT-SAVARIN
Author of Physiologie du Goût.

further than to suggest some such gradation as: positive, beef; comparative, veal; superlative, pheasant. For its greatest satisfaction one should eat slowly and in minute portions—Fletcherism in a sentence. Anything else would be unworthy of our perfected organism, "the structure of the tongue of all animals being analagous to the reach of their intelligence." Under "Thirst" there is a similar, but even more daringly imaginative observation: "The desire for fermented liquors and curiosity about a future state are the two distinctive attributes of man as the masterpiece of nature."

Perhaps the most valuable, certainly the most pleasing, of the chapters are those on "Gastronomy," "The Love of Good Living," "People Fond of Good Living," "Gastronomic Tests," and on "The Pleasures of the Table."

Gastronomy is defined as "the scientific knowledge of all that relates to man as an eater;" being founded upon natural history, physics, chemistry, economics, and cookery, as well as on the sciences already mentioned; and affecting physically, mentally, and morally, every individual, of every class of society, every moment of his life. Some knowledge of it is therefore indispensable to all, and the more as one ascends the social scale, it being well known that the most momentous decisions of personal and of national life are made at table.

"The Love of Good Living" is shown to be not merely a physical, but an intellectual and a moral quality as well, "almost deserving to rank as a virtue;" opposing excess, developing discrimination, promoting physical health, and aiding moral resignation to the laws of nature. In addition, it is an easily and constantly available source of natural and innocent pleasure in a world of pain.

People fond of good living, especially physicians, men of letters, churchmen, and people of sense and culture in general—others being incapable of the necessary appreciation and judgment—always live longer than ordinary men. Napoleon's worst defeats were due to his injudicious diet. Such persons may usually be known by their mere appearance, but for cases of doubt Brillat-Savarin suggests a series of "Gastronomic Tests," or dishes of such indisputable excellence that those who do not instantly respond may immediately be declared unworthy. Thus: For a small income, filet of veal, larded with bacon, or

sauerkraut bristling with sausage; for a moderate income, filet of beef with gravy, or boiled turbot; for a generous income, truffled turkey, or stuffed pike with cream of prawns. It is important in these tests that generous portions be provided, for quantity as well as quality has its effects.

The conclusion of the meditation "On the Pleasures of the Table" must be quoted entire, so worthy is it of a place in "The Golden Book of Hospitality:" "Let the number of guests be small, that the conversation may be constantly general; of various occupations, but analogous tastes; the men of wit without pretension, the women pleasant, but not coquettish. Let the dishes be few, but choice, and the wines of the first quality; the order from the more substantial to the lighter, the simpler to the finer flavors. Let the meal proceed without hurry or bustle; the coffee be hot, the liqueurs chosen with care. Let the room to which the guests retire be large enough for cards, for those who cannot do without them, while leaving ample scope for conversation; the guests animated with the hope of still further pleasure. Then let the tea be not too strong, the toast artistically buttered, the punch skillfully made. Finally, let nobody leave before eleven, and everybody be in bed by twelve."

After reaching such an elevation, Brillat-Savarin wisely follows the dramatic principle of relief, by introducing anecdotes of the halts of a hunting party, and chapters on digestion, rest, sleep, and dreams. His observations and illustrations are always interesting and picturesque, frequently very suggestive, and sometimes strikingly modern—as when he says, "Digestion, of all the bodily functions, has most influence on the morale of the individual;" when he recommends for sleeping, an airy room, no bed curtains, and light but warm coverings; or when he discusses foods that produce sleep, and those that induce pleasant dreams.

The theme of the meditation "On Corpulence"—"The great majority of us eat and drink too much"—is of such general and permanent applicability that it is rediscovered every decade and announced with trumpets. The chapter "On the Prevention or Cure of Corpulence" outlines the diet by means of which for thirty years the author kept that tendency in himself "to the limit of the imposing"—a statement that his portrait well bears out. After a counter meditation on leanness, some felicitations

over the decline of fasting, and an excursus on "Exhaustion and Death"—"Death itself being not unaccompanied by pleasure when it is natural"—the author is again ready for a higher flight.

This occurs in the longest chapters of the book, in the form of "A Philosophical History of Cookery, Ancient, Mediæval and Modern, with an appendix, "On Parisian Dining-Houses." Here, indeed, is richness; the advantages and disadvantages of eating raw meat, the primitive feasting in the "Iliad," the advent of boiling in the Old Testament, how Cadmus brought the alphabet and good cooking to Greece, the elaborate and sometimes strange taste of the Romans—as for dormice and assafœtida—and a survey of the ancient literature of the subject, from the fragmentary poem on gastronomy by Archestratus, to the convivial poetry of Horace and Tibullus. The whole story is told, although briefly, excepting only the peculiar taste of the Greeks for mingling sea-water and turpentine with their wines.

The mediæval and modern development of the art is sketched, although of necessity more rapidly, from the rescue of cookery from barbarism by Charlemagne; through the introduction of spices form the East, garlic from Palestine, parsley from Italy, coffee from Turkey, and the potato from America; to the ages of pastry and of sugar, and the final culmination of the art in political gastronomy. Every line of this section contains such good things as "coffee should be crushed, not ground," and "It was Talleyrand who first brought from Italy the custom of taking Parmesan cheese with soup." But to select would be to quote the whole.

Restaurants seem to have been invented in Paris in 1770. There is a fascinating picture of the best of the author's time, with three hundred dishes and a hundred wines; a height of eloquence over the cosmopolitan sources of a good dinner; and yet higher soaring over the Parisian missionaries of the doctrine throughout the civilized world.

Nor does inspiration wane in the chapter on "Gastronomic Principles Put into Practice—""the treasures of nature were not created to be trodden under foot . . . a good dinner is but a little dearer than a bad one . . . a man may show himself a distinguished connoisseur without going beyond the limits of his actual needs."

The last chapter, "Gastronomic Mythology," is pure creation—of Gasterea, the tenth muse, her nature, habit, aspect, and worship; and then—for, like Donne, "when he is done, he is not done, for there is more"—comes a "Transition": "in writing I had a double object . . . to lay down the fundamental theory of gastronomy, so that she would take her place among the sciences in that rank to which she has an incontestible right. The second, to define with precision what must be understood by the love of good living, so that for all time that social quality may be kept apart from gluttony and intemperance, with which many have absurdly confounded it."

Finally follow a generous dozen of short "Varieties"—anecdotes like "The Cure's Omelette"; personal experiences of "The Gastronome Abroad," some in America; original recipes and original verse; and an "Historical Elegy," in pity for the gastronomic ignorance of the past, and in prophetic vision of the full gastronomic glories of the year nineteen hundred.

Strangely enough it was fifty years before Savarin's work was well enough known outside of France to be translated; and even today, in spite of its delightful qualities, not one in a hundred, even among reading men know it. And yet although one would hesitate, perhaps, to call it "adorable," as Balzac did, it is certainly one of those rarely spontaneous and charming outpourings of personality that belong apart, with White's "Selbourne" and Walton's "Angler."

The New York State Normal College, at Albany, N. Y., is planning a Domestic Science Laboratory in connection with the High School Department of the Institution.

The Mount Morris Baptist Church, New York City, has arranged a series of Sunday morning lectures for an adult Bible Class numbering two or three hundred members, on the general topic "Applied Christianity." This is a move in the right direction. Among the topics set are several which fall within the field of home economics: The Tenement House Problem (illustrated with lantern slides), Miss Emily W. Dinwiddie; The Problem of Play and Amusement in New York City, James P. Lichtenberger, Ph.D.; The Moral Environment of the Young, Rabbi Samuel Schulman, D.D., and The Basis of the New Social Order, George William Knox, LL.D.

Cookery and Laundry Laboratories, Edinburgh School of Cookery and Domestic Economy.

THE EDINBURGH SCHOOL OF COOKERY AND DOMESTIC ECONOMY.

HESTER RIDLON.

Simmons College, Boston.

The Edinburgh School of Cookery and Domestic Economy, as reflected in its annual report and catalog, has much of suggestion for American workers in home economics. This institution is the outgrowth of a school established in 1875. It is conducted under the patronage of her Royal Highness the Princess Louise, Duchess of Argyll and the Right Honorable the Earl of Roseberry, K.G., K.T., etc., is its President. There are also fourteen vice-presidents, thirteen directors and an honorary secretary and honorary treasurer. The School which is located at 3 Atholl Crescent, Edinburgh, is under the guidance, as superintendent and secretary, of Miss E. de la Cour. She has with her an assistant secretary and a lady housekeeper. Besides these there are three senior teachers and fifteen other teachers.

The Edinburgh School seems to be doing in its various branches, exactly what many of our American schools are aiming ultimately to do or are striving to do at the present time, that is, reaching all classes and giving all possible training in household technique, both of the arts and of the sciences. Courses are offered for the training of teachers, for the preparation of those intending to enter hospitals, for the training of household domestics. There are besides, courses for those who desire only one or two subjects without any idea of turning them into a future source of revenue, courses for Working Women and Girls, courses given in the home, besides special separate lessons in definite subjects which are given at the school and may be given at the home. Night courses are added to these and a wide schedule of both lectures and demonstrations.

"Students are received for any number of selected lessons or courses." Each course contains, on the average, ten lessons, though the training for certificate in the special subjects requires varyingly longer lengths of time. There are nine cookery courses offered. Three of these are demonstration courses on "Artisan Cookery," "Plain Cookery," and "Upper Household Cookery," varying in cost from 12/6 to 2/6, or from $3.00 for ten lessons to

$.50 for six lessons. Special prices are made to Cooks and to Working Women and Girls. The practice courses in cookery include the following subjects as they are named in the catalog: (1) "Upper Household Cookery"; (2) "Plain Cookery"; (3) "Baking of Breads, Cakes, Scones, etc."; (4) "Sick Room Cookery"; (5) "Artisan Cookery" and (6) "Cleaning and Scullery." In the courses in actual cooking, the students may either buy at cost the dishes that have been made, or pay a higher fee for the lessons. The course in Upper Household Cookery is the most expensive of the six and costs either $10.50 or $7.50 if the products are bought. The course in Cleaning and Scullery is somewhat unique and includes cleaning of the range, copper, enamel, ordinary pans, crystal, silver, etc.

The work in Sewing, which we would designate as Domestic Art, includes eight courses: (1) Dressmaking (pattern making, fitting and measuring); (2) Blouse making; (3) Patterns for underclothing (patterns for shirts and children's frocks); (4) Knitting; (5) Patching and mending; (6) Advanced sewing, which we would call embroidery; (7) Millinery and (8) a course, as remarkable as the Cleaning and Scullery, which is called "Home Upholstery" and in which such work is taught as one ordinarily has done at the local upholsterer's or at the department store.

The course in Laundry Work is ten lessons in length with a fee of $5.25, or one may take a half course of five lessons. The pupil is required to bring for the first lesson, six rough dried handkerchiefs, and one piece of underwear.

There are seven lessons in Home Bookkeeping, constituting a course which costs $3.12.

The lecture courses which are given cover the following subjects: 1. Hygiene: (a) of the household, including foods, and (b) personal, including school.

2. Home Sick Nursing, a title that we in America extirpate to "home nursing," and would qualify by the term "before the doctor comes," or "when the trained nurse cannot be afforded."

3. Housekeeping. This course numbers ten lessons; and treats of the economics, the provisioning, and the division of labor of the household, of the cleaning of rooms, of the choice of foods, and of minute details of the dining room.

4. Methods of teaching and the theory of education, for which the fee is $5.00.

There are five courses in special training for a certificate. These are:

1. A Cook's Certificate, for which the minimum time required is two months, the demand being for fifty lessons and a test dinner.

2. The Upper Household Cookery certificate. The minimum time is six weeks, and the work must cover attendance at demonstrations and twenty lessons, together with an ice lesson and a test dinner. The cook's certificate is a prerequisite.

3. Laundress' certificate. The work required is fifty lessons and demonstrations and a practical examination. The work includes training at a steam laundry.

4. Housewife's diploma. The fee is $100.00. This course is intended primarily for young ladies as part of their ordinary education. It includes work in sixteen courses specified under cookery and sewing, together with lectures on bookkeeping, nursing, hygiene, household management, etc. It can and may be taken in six months, but must not extend over a period of two years if the courses are to count for a diploma.

5. Special training for Lady Housekeepers. Fee, $85.00. It includes work in fifteen courses, much like the above Housewife's course, except that laundry work is a requirement. This, too, can and may be taken in six months, but must be taken within a year, and the student is required to be over twenty years of age. There are also prerequisites of what we would call grammar and high school education and of moral character.

For students desiring to enter on professional training for nurses a course is given covering two months, the fee for which is $15.75. It includes lectures on physiology and hygiene together with lectures and lessons on sick room duties, invalid and plain cooking, cleaning and scullery. For one desiring the lectures only in this course the fee is $10.50.

Training is given to teachers in cookery, laundry, housewifery, sewing, dressmaking, and millinery. The candidate for teacher of cookery, laundry work or dressmaking must be eighteen years of age, and for sewing, seventeen years. "The training for cookery, laundry work, housewifery, sewing and dressmaking are arranged in accordance with the requirements of the Scotch Education Department." Training may be begun September 8 or March 1, yearly. An extra fee of $5.00 is required for examina-

tion on completing training. In Cookery the fee is $175.00. The work includes learning by demonstration and practice; considerable cookery, physiology, and chemistry, together with practice teaching of children and adults, lectures on personal and school hygiene, and on the theory and practice of education. For Laundry Training the fee is $84.00, and the training is much the same as for cookery, except that the practice and theory is that of laundry work. The Housewifery Teachers' Training costs $63.00. For this is required a recognized diploma of cookery and laundry work as a prerequisite. It includes lectures and practice in household routine and management, mending, cleaning, etc., etc., practice teaching and demonstrating. For the Training in Sewing the fee is $34.00. The work is that of simple sewing together with lectures on the theory and practice of education and hygiene, and a fortnight's practice teaching, besides what the catalog terms "test lessons." For the Training in Dressmaking a fee of $42.00 is required, and the prerequisite is a preliminary examination in plain needlework. It includes training in advanced sewing, dressmaking, tailoring, and demonstrations and practice teaching, as well as lectures on education and hygiene. In Millinery the fee is $34.00; the work demanded is attendance at demonstrations and four courses in practical millinery, together with practice teaching and demonstrations. There is besides these a course in so-called "High Class Cookery," for which the fee is $52.50. It is open only to teachers already holding a diploma in cookery, and the minimum time is three months.

That is to say, the training for teachers includes specific training in their special subject, together with work in method and the history of education, in personal and school hygiene, with practice teaching and the giving of demonstrations. The training offered is arranged in such a way that the teacher may fit herself either for elementary or for secondary education in these special arts and sciences.

The annual report, in addition to information about the courses of study, states that "Staff Teachers have given 5,485 demonstrations and practice lessons, and in addition, have heard and criticised 335 Test Demonstrations by Teachers-in-Training. 2,598 pupils were enrolled in the School for instruction, varying from one lesson to extended courses, in addition

to the number who attended 350 Demonstrations and Lectures given by the Staff in other schools and institutions in Edinburgh and elsewhere."

Certainly with so much work accomplished on a budget of about $35,000, and with so comfortable a balance as the report shows (about $1,000) after all the improvements and the repairs which the School undertook in the past year, 1907–1908, the Edinburgh School of Cookery and Domestic Economy is to be congratulated.

Domestic Science in Newark, N. J.

The JOURNAL has received from Miss Mary L. Caufield, Supervisor of Domestic Science in Newark, New Jersey, a statement regarding the development of Domestic Science in that city which will be of interest. It is as follows: "In the spring of 1902, Dr. Poland, Superintendent of Schools in Newark, N. J., asked me to plan for the equipment of two experimental kitchens, as he wished to try the teaching of cookery in the summer schools before introducing it as a part of the regular grade work. Of course, the expenditure for equipment had to be reduced to a minimum, until such time as the work warranted a greater outlay of money. In each of the two schools (Hamburg Place and 18th Avenue) two classes of twenty each were registered. The 18th Avenue girls received an hour-and-a-half lesson each morning, while the Hamburg Place girls received their lessons in the afternoon. This made six hours teaching a day with an hour at noon to change schools. The tables in these kitchens consisted of boards supported by wooden horses; on these were stood the gas plates which were supplied with gas through rubber tubes from above. There were no sinks in either kitchen, all water having to be carried some little distance from the courts. A scrub pail answered for a refrigerator. The work progressed beyond our most sanguine expectations, and at the end of six weeks the pupils cooked and served a course dinner to the Board of Education, the members of the Board being present at the preparation as well as the serving of the dinner. That winter I was requested to take charge of classes in the evening schools. The registration required the services of another teacher,and an assistant was appointed. The following fall,domestic science was made part of the regular grammar school course, and the work in the evening schools has grown to require the services of twenty teachers. Fourteen schools have well equipped kitchens; one school has three kitchens, and two have two kitchens each. The evening school classes include women from all walks in life, shop girls, young housekeepers and those expecting to be homemakers and classes of nurses from hospitals. It is not an unusual thing to find mother and daughter attending the same class in the evening school."

HOME ECONOMICS IN UNIVERSITY OF MINNESOTA.

JUNIATA L. SHEPPERD.
St. Anthony Park, St. Paul.

The University of Minnesota, located at Minneapolis, Minn., is composed of several colleges or departments, each of which fosters the interests of one or more special lines of work. The Agricultural College is the one of these with which the Home Economics course is connected. This course includes three distinct lines of work,each of which is presided over by a specialist in that line; Domestic Science, Domestic Economics and Domestic Art. Three or four courses of different length are offered under the general head of home economics: (1) Agricultural High School Course. (2) Home Economics College Course. (3) Teacher's Short, or Normal Course. (4) A General University Course, supplemented by one semester's work of eight periods each week in home economics, divided equally between domestic science and domestic art. The first is the shortest and most elementary of the courses; the second the longest and most thorough.

The Agricultural High School Course.

The former is designated as the Agricultural High School Course. It leads to no degree, prepares for no special professional or technical work. Its sole aim and object is to make better citizens. It proposes to accomplish this by imparting to as large a number as possible such knowledge as will be of greatest use in home life. This technical knowledge is combined with such general training as will render the graduates ready to meet the obligations of adults in their associations in family, society and public life. The chief idea of the founders of this school in inaugurating such a course was to provide a place with such environment, entrance requirements, educational facilities and class of students, as would render it most popular with the young people from the rural districts. They hoped, in this way, to provide a high school which would advance the interests of all rural communities, and give to country people advantages equal to those which city life and schools afford. That they made no mistake, the school attests, and it is well attended and now shows

good results in both rural and urban homes. This course, on account of its special adaptation to rural conditions, is in session during the autumn and winter only of each year, and extends through three school years. It is now open to students who have finished eighth grade work in either city or rural schools. No one specializes; all who enter pursue the prescribed course. The details of this course are given below.

Agricultural High School Course of Study.

[Figures in brackets indicate the number of periods per week in which the subject is pursued. All work in subjects marked thus* extends through double time in the daily program.]

FIRST (C) YEAR

FIRST TERM

Agricultural botany [5]
*Drawing [2]
Music [2]
Farm Mathematics [5]
*Cooking [2]
Physical training [2]
*Sewing [3]
Social culture [1]
Field agriculture [3]

SECOND TERM

Agricultural botany [5]
English [5]
Music or literary society work [2]
Comparative physiology [5]
Study of breeds [5]
*Laundering [2]
Drawing (farm houses) [2]
Physical training [2]
*Farm Accounts [2]

SECOND (B) YEAR

FIRST TERM

English [2]
Agricultural physics [5]
Dairy chemistry [2]
*Dairy husbandry [2½] { Dairy lectures; Dairy practice; Dairy breeds }
Fruit growing [3]
Music [2]
*Farm accounts [2]
*Cooking [2]
Household art [1]
Physical training [2]
*Sewing [2]

SECOND TERM

English [2]
Agricultural chemistry [5]
*Dairy husbandry [2½] { Dairy stock lectures; Dairy practice; Domestic Bacteriology }
Music [2]
Agricultural physics [5]
Vegetable gardening [3]
*Cooking [3]
Home management [1]
Physical training [2]
*Sewing [2]

THIRD (A) YEAR

FIRST TERM

Agricultural chemistry [7]
Forestry [3]
Entomology and zoology [3]
Poultry [3]
Algebra [5] Optional
* Cooking [2]
* Sewing [2]
Music [2]

SECOND TERM

Civics or geometry [4]
Plant propagation [3]
Entomology and zoology [3]
Algebra [5] Optional
Meats [1]
Home economy [1]
*Cooking [3]
Domestic chemistry [3]
*Sewing [3]
Domestic Hygiene [1]

College Course in Home Economics.

The course numbered two above, is a four-year university course directed along home economic lines. This course leads to the Degree of Bachelor of Science in Home Economics. It is open to graduates of approved high and normal schools, and of course, to university graduates who wish to secure technical knowledge and better understand the application of the various sciences to the affairs of the household. Details of this course are given below.

College Course.

FRESHMAN YEAR

For graduates of approved High Schools or others of equal standing

FIRST SEMESTER

Rhetoric 1, three hours
Agriculture 11, three hours
Agriculture 1, three hours
Agricultural Chemistry 1, five hours
Horticulture 1, two hours
Entomology 1, half semester, three hours
Domestic Science 1, four hours
Domestic Art 1, four hours
Drawing 1, four hours
Domestic Economics 1, three hours
Physical Training, two hours

SECOND SEMESTER

Agricultural Chemistry 3, six hours
Horticulture 3, half semester, three hours
Animal Husbandry 4, half semester three hours
Domestic Science 1, four hours
Domestic Art 1, four hours
Drawing 2, half semester, four hours
Rhetoric 1, three hours
Mathematics 3, half semester, three hours
Horticulture 3, half semester, four hours
Dairy Husbandry 1, half semester, four hours
Domestic Economics 3, three hours
Animal Husbandry 5, half semester, one hour
Physical Training, two hours

SOPHOMORE YEAR

FIRST SEMESTER

Botany 1 (B), six hours
Zoology 1, six hours
German or French 3, three hours
Agricultural Chemistry 5, six hours
Rhetoric 3, three hours
Domestic Art 2, four hours
Domestic Science 2, four hours

SECOND SEMESTER

Botany (B) 1, six hours
Zoology 1, six hours
German or French 3, three hours
Agricultural Chemistry 5, six hours
Rhetoric 3, three hours
Domestic Art 2, four hours
Domestic Science 3, one hour
Domestic Bacteriology 4, one hour

JUNIOR YEAR

FIRST SEMESTER

Domestic Economics 2, three hours
Domestic Art 4, four hours
Domestic Science 5, four hours
Education 1, three hours
Agricultural Chemistry 6, six hours
Agricultural Chemistry 7, three hours
Psychology 1, three hours

SECOND SEMESTER

Domestic Science 5, four hours
Domestic Art 4, four hours
Education 2, three hours
Agricultural Chemistry 9, six hours
Farm Structures 6, three hours
Drawing 3, four hours
Domestic Art 3, three hours

SENIOR YEAR

FIRST SEMESTER

Domestic Art 5, three hours
Domestic Science 6, six hours
Psychology 2, three hours
Farm Structures 7, three hours
English, elective, three hours
Elective, three hours

SECOND SEMESTER

Domestic Science 6, six hours
Domestic Art 6, six hours
Agricultural Chemistry 13, three hours
Horticulture, elective, three hours
Elective, three hours
Elective, three hours

This course is intended primarily for training teachers, yet it endeavors to prepare all young women who come under its influence, for "home making." What the domestic science part of this course attempts to teach, and how this work is carried forward, may be briefly stated as follows: The first aim of this four-year course is to give proper emphasis to pure air and water and good food as the rational basis of health. Students spend much time during the first year, in such library reading and class

room work, as will enable them to understand the modern ideas in regard to composition and quality of food materials and their comparative food and money value. Practice is given in such methods of cooking as tend to render foods most palatable and digestible with the least possible waste. Laboratory practice, lectures, and class room discussions on similar topics, extend through almost the entire year. During the latter part of the second semester, however, a portion of the time is given to laundering and sanitation. These subjects afford an excellent opportunity for showing the application of chemistry, physics and other sciences, to household work. In the laundry, the application of the principles of chemistry appear in the preparation of water, the composition and use of soaps and other detergents, bleaches, bluings, starches and other agents. The application of science to matters of common experience give a new meaning to cleaning the wringer, precautions for preserving colors and safeguarding fabrics, washing with gasoline and other operations. Sanitation and ventilation offer a field for the applications of physics and again give an entirely new aspect to many otherwise vexing problems. The work of the last three years is carried on in a similar way, in the belief that students will, by means of constant lectures, text book work, library readings, laboratory practice, written essays and class room discussions, gain useful knowledge. During the senior year, practice teaching is required.

Students are expected by these means, to gain a comprehensive idea of food materials, their varying energy value and the food and energy requirements of the body; the changes in nutritive value due to cooking and other topics necessary to the intelligent management of a family dietary. By studying the different types of food materials, including their preparation and use, the students come to know standards of quality, to understand market conditions and detect adulteration,and to command approved methods of storing and preparing foods; in short, to be competent to care for the food of a family.

The scientific aspect of food must be united in the bonds of holy matrimony with a practical knowledge of the cook's art, before a man can discourse learnedly of food.—FOTHERGILL.

Domestic Science Laboratory, University of Minnesota.
(See page 150.)

New Dormitory Building, Miss Tsuda's English Institute, Tokyo.
(See page 155.)

A JAPANESE DEPARTMENT OF DOMESTIC SCIENCE.

Miss Ume Tsuda's English Institute in Tokyo,is one of the three private institutions for the higher education of women in Japan whose graduates receive government licenses to teach in secondary schools without further examination. The Japanese Government is making special efforts to strengthen and standardize its school system, which has expanded so rapidly that the quality of its teaching force and equipment could not keep pace with the number of pupils. In this new rigor of educational requirement, the recognition of the standing of Miss Tsuda's collegiate institution has great weight. It is the belief of Miss Tsuda that an understanding of western ideals and western thought would best help the Japanese girls adequately to fill their new place in the life of their country. Great stress is laid on the study of English literature and language as the key to this situation. Closely akin to the study of English in the understanding of western thought, is the study of science, and the institute is developing scientific courses as rapidly as laboratory equipment and teaching force can be provided. At present, the science courses are in special relation to the Domestic Science. Department, which has been strengthened by the addition of Miss Yoshi Kawashima to the faculty. Miss Kawashima has studied for two years at Simmons College, and had previously had training in domestic science along Japanese lines. It is hoped that a special comparative study of dietaries can be made in connection with the two courses in Japanese and in English Domestic Science Miss Tsuda herself was educated in America, living here for ten years, from the age of seven to seventeen. Later she returned to this country and studied for three years at Bryn Mawr, specializing in science. The college education of women is just beginning in Japan and the high standards which Miss Tsuda's Institute sets will have great influence in other institutions taking up the work. The accompanying illustration shows the new dormitory opened last September for some of the resident students of Miss Tsuda's school, and which provides equipment for instruction in domestic science.

"There are three companions with whom you should keep on good terms—your wife, your stomach and your conscience."

EXTENSION WORK IN HOME ECONOMICS.

MARTHA VAN RENSSELAER.
Cornell University.

The Home Economics movement began not with extension work but with academic study in colleges and technical schools. As the importance of the movement has been recognized the necessity of preparing lectures and demonstrations for the general reader and listener has been responded to by many colleges. Probably the west has done more of this than the east. Extension work has made rapid progress during the last few years. The New York State College of Agriculture at Cornell University perhaps took the initial step in its Reading Course for Farmers' Wives. Other colleges in the meantime have organized short courses for women, traveling schools, and have to some extent sent out printed matter. It is possible in this outline to report only a part of the work that is being done in different colleges.

The University of Illinois has worked out extension plans in three distinct lines. At a meeting of the High School Conference of the University of Illinois in November, 1907, a domestic science section was organized and a committee was appointed to prepare a syllabus on domestic science for use in the high schools of Illinois. The syllabus which has been prepared suggests an orderly development of the subject to meet different conditions. The University has this year sent one woman to thirty institutes of the state. Other members of the teaching force in the department of household science have spoken at other institutes whenever it could be arranged. Thus the department has had representation at no less than sixty institutes during the past year. The fourth annual session of the School for Housekeepers was held this year with a registration of 101, the most successful in its history. Thirty-one counties were represented. This school continues for two weeks. The course of instruction is planned to meet the needs of those students who specialize in other lines of work but desire a knowledge of household science, and, secondly, for those students who make a specialty of household science. An experimental house at the University is a source of much interest. It is open daily from 10 to 12 and from 1:30 to 4:30

and shows to visitors the principles of household decoration and equipment from an experimental standpoint. Unlike laboratory work, it gives students a real experience in the kitchen and other living rooms in a house.

The University of Wisconsin in its College of Agriculture offered February 9–13, 1909, a woman's course in home making. Lectures and demonstrations on food and cooking were given by Miss Clift and Miss Sater of the Wisconsin Farmers' Institute staff. Problems of home making were discussed by Mrs. Nellie Kedzie Jones of Kalamazoo, Mich. The farm home in its sanitary relations was treated by Miss Day of the Stout Manual Training School, Menomonee, Wis. A talk was given on the selection of pictures by Mrs. Hutchinson of Madison. Miss Abby Marlatt of the Manual Training High School, Providence, R. I., gave lectures upon home and school training. Miss Fye of Kalamazoo lectured upon practical home nursing and Mrs. Blair of the University of Minnesota upon textiles.

The Ontario Women's Institute Convention was held at Guelph, Ontario, in connection with the provincial winter fair. There was a large representation from the institutes of the province, making a daily audience of from 500 to 600 women. Assistance was had from the professors of the college on subjects which are of significance in women's household work. There is a very close connection between Macdonald Institute located at Guelph and the institute work in the province. The women in this way receive valuable aid in their study of household subjects.

The State College of Agriculture at Athens, Georgia, held a Conference of Farmers' Wives, January 19–23. The program shows valuable assistance from the State College of Agriculture and from other schools. Educational subjects were introduced to show the correlation between home and school life. There were exhibited at this meeting the work of the common schools, also labor saving devices and household conveniences and two traveling school libraries.

A Housekeepers' Conference was held in January at the University of Missouri in connection with various agricultural meetings. Miss Edna Day, Professor of Home Economics in the University, has succeeded in interesting the women of the state in the study of domestic problems in connection with her department. The program consisted of lectures, discussions and

demonstrations upon various household subjects. Miss Van Rensselaer of the New York State College of Agriculture gave two addresses, one on what the state may do for farmers' wives, the other upon household improvements. A unique feature of the instruction for the week was the model kitchen. This kitchen can be placed wherever desired either at the University or it can be used for extension work in the state. The size of the room and the places for doors and windows are indicated. A full kitchen equipment placed with reference to convenience in doing the work gives opportunity for study and criticism.

At the State Agricultural College, Fort Collins, Colorado, Miss Mary F. Rausch, head of the domestic science department, reports in extension lines that they have held nine short courses in various parts of the state, one of which was held at the College with a daily attendance of 205 women who rarely missed a session. At these meetings farmers' wives, club women, teachers and many young housekeepers are in attendance. In some places arrangements are made for the attendance of teachers and the pupils in the high schools. Under these conditions the pupils are excused for the entire week from regular school work; the teachers are in attendance, call the roll, correct the note books, grade the work and at the end of the week an examination is given to the girls on the week's work. In one western mining town women walked in every morning and walked home at night. They lived from two to three miles outside the town and the ground was covered with snow. At these meetings one dollar is charged for the week's work. In order to secure a short course a town agrees to pay $100, which means that they may secure 100 women who will pay one dollar each for instruction. This amount is sufficient to pay for groceries, for a helper in the demonstration work, for traveling expenses, and the hotel bills of the instructors. The hall is furnished by the local authorities and the utensils are loaned for the purpose. These short courses have an average attendance for the entire week of 200. In several of the towns the club women have become interested in the enterprise with a view to introducing domestic science in the schools of Colorado.

At the Maryland Agricultural College under Mr. William L. Amoss, director of farmers' institutes, a unique work is being done. When the institute work first began in Maryland there were few farmers' organizations and not many women were

associated with the work. Short courses are organized wherever convenient in the state and instructors are sent to conduct the work in domestic science. The institute car developed from the idea of the special train and steam-boat, and the desire to introduce short course work into the rural districts. They bought a second-hand, superintendent's private car containing kitchen, hot-water heating device and lockers for stores. To this was added four upper berths similar to those found in a Pullman car. A section is used for the dining room. The remainder of the car is fitted with chairs, blackboard, case for charts and a stereopticon, for which they make their own acetylene gas. The windows are darkened during the day by heavy curtains. This car has been run for two seasons very successfully. Two lectures on Horticulture are given in the car and two lectures on Domestic Science by Miss Anna Barrows, morning and afternoon. Two men go out each morning to towns within driving distance to conduct the old style institute. Some days they inspect farms, orchards, buildings and stock and advise with the owners of the farm. They are now organizing committees among the men and among the women who will prepare programs and aid in the work of the department.

In Kansas the extension work has been carried on in connection with the farmers' institutes. The faculty of the home economics department at the Kansas State Agricultural College visited during the last year sixteen farmers' institutes, appearing twice on the program at each place. The work consists of demonstrations, lectures and judging bread and fruit exhibits. This work extended over six weeks and emphasis has been laid upon bread making, with a bulletin upon the subject and a score card with explanations as to its use. At the state farmers' institute held at the College during the Christmas holidays there was a domestic science department with an enrollment of sixty representing almost every section of the state.

At Ames, Iowa, under the Extension Department of the State Agricultural College a large work has been done to develop a greater interest in home making. Lectures and demonstrations have been given at the farmers' institutes, meetings of women's clubs, state and county fairs, teachers' institutes, schools and colleges. There have been ten short courses covering one week each in ten different localities of the state. Miss Edith G.

Charlton, in charge of the domestic science, gave during seven months of the past year 226 lectures and 90 demonstrations, explaining the principles of cookery and the effect of heat on different food materials. Other lectures and demonstrations have been given in sewing. The annual short course was held at the State College in December and other short courses have been held in ten different counties with an average attendance of about 125. At all of these meetings there was in addition to the regular class membership a daily attendance of from 25 to 75.

At the New York State College of Agriculture, Cornell University, the extension work consists first, of the Reading Course for Farmers' Wives; second, the organization of rural clubs for study of domestic and cultural subjects; third, the short course of three months at the college; fourth, the organization of the Home Makers' Conference, officered by women of the state and meeting during Farmers' Week at the college. The present membership of the Farmers' Wives' Reading Course is 11,800. Bulletins are issued during this year upon Sanitation accompanied by questions to be answered by members and returned to the College. A large correspondence in connection with this work is held with the members who have the privilege of asking for any information concerning the work of women in the home and on the farm. The members of the winter course in home economics are given twelve lectures each week upon domestic science with the privilege of taking work in addition in the dairy, poultry, horticultural or general agricultural departments. The laboratory is open to the students two afternoons of the week. During Farmers' Week in February an exhibit of a model kitchen, a laundry equipment, and household labor-saving devices was given at the College. There were 3,000 visitors during the week, many of whom both men and women inspected the Home Economics department. Miss Margaret Mitchell of Drexel Institute gave a course of lectures and demonstrations upon the cooking and preparation of cereals. A course of lectures upon health was given by specialists in the University. Lectures were also given by the faculty of the department upon nutrition, household management and household furnishing.

There will be additional reports in the JOURNAL regarding Extension Work. It is desired to have as complete reports from the colleges and schools of the country as can be obtained.

WOMEN'S INSTITUTES IN NORTH CAROLINA.

The report published in the *Bulletin of the North Carolina Department of Agriculture*, for the women's institutes conducted in that State in 1908, is an interesting and encouraging document. It is in part as follows:

"The holding of institutes for the women in the farm homes of North Carolina was inaugurated in 1906 and 21 institutes were held in 19 counties. During 1907 this work was greatly extended, there being held 50 institutes in 38 counties. During 1908 the number was also largely increased, 68 institutes being held in 46 counties.

"The success of these Women's Institutes has more than justified our assumption that an effort to improve rural conditions through the co-operation of the women on the farms would be as effective as the institutes for men had been. Allowing for the general lack of knowledge regarding the purposes or objects of these institutes, the interest in them and the appreciation shown for the information sought to be imparted have been very gratifying, and indicate very plainly that the women on the farms of the State are ready to take hold of the work and make it a tremendous power for the upbuilding of farm conditions and farm life. The best farms are impossible without the best farm homes, and a knowledge of modern domestic science is as important and useful to the woman who is to develop and maintain the ideal farm home of the future as is a knowledge of modern agricultural science to the man who is to build up a model farm.

"For the benefit of those not entirely familiar with the scope and nature of the work contemplated by these Women's Institutes, the following list of subjects is given as a sample of the topics discussed:

The Farm Fruit Garden, the Farm Vegetable Garden, Farm Poultry, Farm Butter Making, Beautifying the Home Surroundings, Home Conveniences, Literature for the Farm Home, Homemaking, Home Nursing, The Nutritive Value of Foods, Cooking Meats, Vegetables, etc., Bread Making, Educating the Girls on the Farm, and Home Sanitation.

"The usual practice has been to hold the Women's Institute on the same day and at the same place as the institute for men, but

in a separate hall. At least one and usually two separate sessions are held, which enable the women to form an organization of their own and permit of greater freedom in the discussion of special household topics, many of which would neither be instructive nor interesting to a mixed or general audience. Two women lecturers are usually sent out by the State to each meeting, and when a joint session is not held with the men, some of the lecturers from the men's institute usually assist at the women's meeting in the discussion of such subjects as dairying, poultry-raising and gardening. The object of these women's meetings, as with those for men, has been one of instruction rather than entertainment.

"The same general plan of organization has been followed with the Women's Institutes as with those for men. A county institute committee was selected in each county where an institute was held, and where there was more than one institute in a county a local committee was also organized. When these county committees become sufficiently interested and active then township or neighborhood clubs or institutes, with more frequent meetings, are organized.

"In many places in the State the women are organizing local branches of the Women's Branch of the Farmers' Institute. Some have bcome firm organizations, strong and self-supporting, and others are struggling still for even an existence. Extracts from an actual report of work done follow:

" 'We had an institute meeting in January which was a success, I think. We served a luncheon of sandwiches and coffee with fruit, given by the grocers. The plates this luncheon was served on were given by the merchants; each person took home a plate, cup, saucer, spoon, bottle of Wells & Richardson's butter color, a tablet and pencil, woolen scraps from Hargrave & Leak skirt factory, and several other little articles. The name of the merchant who contributed was on the article which he gave. We had a poultry show in connection with this. Our hardware men loaned us churns, stoves and the conveniences used in housekeeping; a system of hot and cold water was shown and explained. Pretty prints of "Gilt Edge" butter made by the ladies were sold. Different articles were sold or exchanged. Poultry was exhibited and quite a number sold. We had a good meeting'."

An interesting feature of the report is the statement regarding demonstration railway cars, one of which was used for domestic science instruction exclusively.

"The special trains are usually run so as to devote at most a few hours at a place, from three to ten stops being made each day. In this way much spectacular effect is obtained, but facilities and opportunities for teaching are sacrificed. While one whole day is all too little if much real instruction is to be given, there is unquestionably much to be gained in effective work by the facilities which one or two cars offer for carrying materials, apparatus and implements for demonstrations.

"During the past institute season itwas determined to use two cars, one for domestic science demonstrations and the other for agricultural implements, seeds, spraying, and dairy apparatus, etc., for demonstrations at the men's meetings. A passenger coach from one end of which two seats were removed was fitted up as a modern kitchen with labor saving utensils and devices. In this kitchen was an oil stove, oven, ice box, kitchen cabinet, fireless cooker, sink and necessary utensils. The remaining seats of the car were utilized for seating those attending the demonstrations, and when the attendance was not too large the Woman's Institute was held in this car. It is believed that this is probably the first domestic science car ever run, but it clearly demonstrated its utility in rendering more effective the work of the women's institutes by offering facilities for actual demonstrations of many of the things taught. These cars were furnished and hauled free of charge by the Southern Railway Company, through the courtesy of the Land and Industrial Department of the company.

"These cars were used at thirty institutes, separate meetings for the men and women being held in the forenoon and for a part of the afternoon and joint meetings for the remainder of the afternoon and at night. The results obtained were more than satisfactory, especially with the domestic science car, and it is felt that this use of the car for the purpose of adding better facilities for teaching is the proper use of the special institute car or train rather than the spectacular effect, which has apparently been the chief aim and must result from the short time usually spent at each stopping place with the special institute train."

TRAVELING COOKING SCHOOLS FOR RURAL REGIONS, IN GERMANY.

M. SALM.

A skillful housewife is the first requisite for the comfort and success of every household, but the farm housewife is an especially important factor in the family life since her activities are not confined to the house alone but extend to the dairy and other farm enterprises.

The need for the satisfactory training of farm housewives led in Germany to the establishment of rural schools of home economics where farmers' daughters can receive an education which will fit them for their work as farmers' wives. Undoubtedly such schools have great importance as is shown by the many well trained housewives who have received instruction in them. However, it is equally true that they do not meet the needs of all the agricultural population. The bulk of the rural population in Germany are small farmers. In such homes the help of the daughters is needed, and even if this were not the case, it is seldom possible to provide the money required for tuition and other school expenses. Furthermore, many farmers feel that having attended such schools, the daughters would not be content to return to the simple conditions of their home farms. For this reason many German farmers are not very friendly to the regular type of rural schools of home economics. Nevertheless, good training is undoubtedly essential for all farmers' wives, for those in the humbler homes as well as for those on the prosperous farms. As a solution of the difficulty traveling schools were considered. Baden was the leader in this movement. For many years this province has provided for the rural regions numerous courses in cookery suited to local conditions and in sewing, bookkeeping, etc., which have been very well attended and popular. The Dill district of the province of Hesse-Nassau has also established traveling schools of cookery which are managed by trained teachers. These schools very soon become popular in rural regions and the movement is growing rapidly.

In the autumn of 1907, the district of Cöln, under the auspices of the district authorities, established the first traveling school of home economics. The teachers employed are well trained, and

give instruction in selected villages. Each teacher is required to give six courses a year, the courses being of six weeks' duration. Where necessary the township or village pays all or part of the expense of pupils who could not otherwise afford to attend the school. In order that the instruction may be as intensive as possible the number of pupils in a group is limited to twenty-four. These traveling schools soon become popular and it is proposed to establish them in other regions of the Rhine province.

Bavaria has also begun the establishment of traveling cooking schools. The Agricultural Section of the Bavarian Farmers' Association in Regensburg of which Dr. Heim is a leading spirit, decided in the autumn of 1907, to establish such schools and set aside money for the purpose. Two nuns well trained in the theory and practice of the subject were selected for the work and the courses cover four or five months in the winter. Since the Farmers' Association is responsible for the teachers and for the bulk of the other expense the cost of instruction to the pupils is very small. The farmers' daughters not only of the locality selected but also of the neighboring country attend, and so a fairly large region comes under the influence of this educational movement.

From time to time the number of these traveling schools has been increased so that they are accessible to the majority of the country villages in the province. The plan provides that courses be given in a stated locality every six or seven years. The village selected for such school work usually provides a school room free of cost.

In lower Franconia and in the Palatinate the traveling school movement has also begun. The attendance was large at the opening of the first school of this sort in Hundsfeld in Lower Franconia and met with the approval of both the scholars and the parents.

The cost of establishing and maintaining a traveling school of this sort is estimated as follows:

INITIAL EXPENDITURE

2 portable cook stoves at $20 each	$40.00
2 sets of cooking dishes, etc	18.00
2 large folding tables at $7 each	14.00
Plates, knives, forks and other table furnishings for 25 persons	10 00
Charts and other illustrative material	8.00
Books, etc., for teachers	5.00
Sum total	$95.00

CURRENT EXPENSES

Teacher's salary per term	$25.00

TOTAL EXPENDITURE PER TERM

Teacher's salary	$25.00
Estimated wear and tear of material and interest on investment	11.90
Sum total	$36.90

The great advantage of the traveling school is that the students are able at once to put into practice in their homes whatever they have learned in school. Another advantage is that the teacher can visit the pupils' homes and see that they really understand what they have been taught. It is to be hoped that these traveling schools of home economics may do much for training housewives in rural regions and so contributing to produce satisfactory rural homes which are of the utmost importance to the State. *Translated from Deutsche Landwirtschaftliche Presse 35 (1908), No. 25. pp. 275, 276.*

Training Professional Cooks. According to the writer in a recent number of "The Illustrated London News" professional men cooks have held better positions than women cooks because as a whole they have had superior advantages as regards training. Some of the statements made regarding the training of professional cooks are of interest in a consideration of the general question of training.

"What Miss Nightingale did for nursing—the discovery of the way to enlist in its duties educated and cultivated women—is what is needed to elevate cooking as women's work. It needs brains, powers of organization, memory, acute senses, to be a first-rate cook. . . In old days, the good family servants would take and train their youthful successors; and girls, in their early years at service, were content to take a small wage in consideration of the fact that they were, so to speak, apprenticed to learn their work. Now there are no elderly servants long settled in families, as a rule, to take an interest in the youthful new-comers into the field, and the ignorant little damsels, far from realizing that they have all to learn, expect to receive at once the wages of a competent worker. It is not so with boys who determine to be cooks: They are properly apprenticed to a chef to be taught, and are not paid at all, or very little, till they have learned their business. We require someone with the influence of a Miss Nightingale to impress on all would-be cooks the lesson about it that she so strongly inculcated about nursing—the absolute need of training. 'There is no such thing as amateur art,' she wrote, 'and there is no such thing as amateur nursing. Three-fourths of the whole mischief in women's lives arises from their excepting themselves from the rule of training considered needful for men.' Would that this could be realized about cookery."

A CAMPAIGN FOR HOME MAKING.

EUPHEMIA CLARK.
New York City.

Home making for wage-earners' families in congested city districts is one of the most difficult problems in modern social life. First, the standards and knowledge among women responsible for the homes are deficient; second, the conditions of home making are extremely hard.

A large mumber of women marry and set up housekeeping at about the age of twenty, after, on the average, five years' work in shop or factory. Work for them began as soon as the compulsory term of education was ended, so that, even if the home life was exemplary, opportunity to gain training from it was small. Often the standard is already lowered by the struggle against the difficult conditions of tenement life. Moreover, the mind has not been trained enough to profit by books and by experience. Thousands, in addition, have been transplanted in adult life, from peasant life in Europe, to city life in an English speaking country. They are especially likely to reap the harm and discomfort of city life and miss its benefits. If some have been for a period at domestic service, that advantage is partly nullified by the difference in their own and their mistress' standard of expenditure. Few of them are equipped with proper knowledge of food, hygiene, children, clothing, sanitation, and other factors in the home situation.

For them, moreover, the conditions of living are the very hardest. Wages are small, proportional expenditure for rent is great, available tenements have little space or privacy, practically no opportunity for quiet. With congestion of population, chances of healthful play are reduced, chances of diseases and bad habits are multiplied. The soil, wear and tear of clothing, is increased. Food, clothing and furnishings offered for sale are pretentious and inferior.

Could there be a more fruitful field for the professional teachers of home making than this? Let no one think the task hopeless; there are many proofs to the contrary.

The first requisite for the campaign is a good leader and administrator. She should have a thorough technical training,

an experience of life in the neighborhood where she expects to work, a sense of the social problems involved, a pleasing personality and abundant vitality.

The second requisite is a large number of responsible helpers with technical training. The emphasis is strong here on numbers. Standards of living are, to some extent, a community creation. Styles in housekeeping and child training can be set. They would be of powerful influence. But suppose the field of endeavor to be a metropolitan school district of approximately eighteen thousand children, of which a single block may contain fifteen hundred people. It will be conceded that the strongest personality reinforced with the best of training will still need help to make a marked effect on such a community.

It is already clear how beginnings could be made for this campaign. In the first place, there is a mass of material worked out by the trainings chools and available for teaching. It has to do with the values, chemistry, manufacture, preparation, digestion of food; with physical and mental welfare of children, with hygiene and recreation; with choice, planning, repairing, remodeling of clothes and furnishings. It is good material. It would be made use of in a thousand unconventional ways—in any way that opportunity seemed to suggest—perhaps seldom by formal class methods. Much information of food values must be given out in form as dogmatic as the "Don't spit" cards of the tuberculosis fighters. Sometimes the teachers will find themselves instructed in details of inexpensive management; then they can start a bureau of information among the neighbors. Many schemes of co-operation, e.g. in buying sheeting at wholesale, or owning a machine in common, might be successful under management. Some groups of women would enjoy and profit by a child study hour suitably conducted. In everything the work must be practically adapted to particular circumstances.

Besides the many opportunities for teaching and managing, there would come openings useful for experiment and investigation. For instance, a dozen individuals among the neighbors have tuberculosis but cannot afford the milk and egg diet. Is there any cheaper substitute? What are the best toys that can be made at a marketable price? Are ready-made children's clothes a good investment? How much loss is incurred by

purchasing food in small quantities? What are the variations in standard of living for a given per capita income? Could blocks A and B be remodeled into good living quarters and yield 4% on the investment? These are suggestions only of the dozens of questions which come up to be answered.

Beyond the teaching and investigation would come the use of records and the statement, for the use of other "social workers," of first hand facts accumulated. Is there a body interested in housing? Pass on to them the facts of convenient and inconvenient arrangement, about rise in rents, why neighbors live just where they do, etc., etc. Is there a health committee? Let them know the attitude of the neighbors on available dispensary and hospital service. Is it adequate? On what medical matters is the neighborhood most ignorant? How do the neighbors fear in contact with the police, the courts, the street cleaners, the Board of Health, the Public Schools? Pass on comment and suggestion where it will tell most. Make suggestions from experience to people interested in recreation and amusement. It has all of it direct bearing on home life.

For all of this work two things are needed; large personal acquaintance in the neighborhood and connection with betterment agencies. Both these factors point to the social settlement as the best starting point from which the leader can work. She would gain indispensable help through a permanent residence there, and residence for some months, before attempting to put her helpers to work. One settlement the writer has in mind could introduce this leader to several hundred families. For many of them she could be furnished with history extending over several years. Besides this wealth of acquaintance, she could have the use of various clubs and classes in the house, of a visiting nurse, an able health committee, a committee on education which had established cordial relations with the district schools, an art and industrial committee, a group of residents more or less intimately connected with the leading welfare committees of the city. Her object and theirs would be the same—better neighborhood life.

It would be the province of the leader to guide her assistants, and to pass on to them as much as possible of her experience. She would have to demand from them a certain amount of technical training. This has been something of

difficulty hitherto. Settlements can rarely afford to pay a large force of trained workers for one special purpose. Private endowment for the large sums required is difficult to secure, especially, a permanent annual income.

The most attractive solution seems to be the co-operation of training schools for teachers of home making subjects with the settlement, through a plan by which last year students under the trained leader, might be put into the field, and gain credit for college work. Such last year students, who have had considerable training in home economics, would be sufficiently advanced to be of real use, and on the other hand, would themselves profit by trying out their learning on the hard problems of tenement life. The plan is attractive because it promises to get work well done, and at the same time, train an ever increasing number in the social application of their work. The economic factors in domestic science would come to be more practically dealt with. Students who had elected the social work would be especially valuable in public schools. The fact that students so trained were available would tend to extend the scope of public school work, to the extent perhaps, of whole special courses in industrial schools. Properly administered, the course would create a kind of useful scholarship which any university might be proud to honor with credits.

It should be mentioned that the writer has by no means overlooked in this proposal, the various useful experiments already undertaken. In New York City, for instance, practically all settlements have classes in cooking. In one of them these are taught by practice pupils from a training school. Kitchen gardens flourish in many places. Model flats are kept in different parts of the city, one of the charity organizations has a trained advisor who goes about in the homes of its *clientele*, school lunches are s erved in two public schools.

These and others, are valuable and suggestive enterprises, but so far as the writer knows, none has reached the magnitude of a neighborhood campaign. It is believed that this could be done only by such a leader as has been described, directing her force of trained assistants against the difficulties of her neighborhood, and creating there a public understanding of needs and possibilities of good home making.

DIET IN THE PHILIPPINES.

DR. C. F. LANGWORTHY.
U. S. Department of Agriculture.

Though popular statements are often made regarding diet in the Orient the total amount of information on this subject which is based on actual dietary investigations is limited. It is frequently stated that the Oriental races live almost exclusively upon rice and that the total amount of food eaten is small in comparison with that of western races. As shown by the work of Oshima[1] and other investigators and by the writings of many who are familiar with the subject, rice fills the same place in Oriental dietetics as wheat flour, potatoes and other starchy foods do elsewhere. In Japan where domestic animals are few in number, fish and other sea foods are important articles of diet, while soy bean products, which supply nitrogen in considerable quantities, are part of almost every meal. These articles and a wide variety of vegetables, fruits and other foods make up a comparatively varied diet.

In China and some other eastern countries domestic animals are much more common than in Japan and make up a larger proportion of the total food supply. In most of these regions soy bean cheese or bean curd and other soy bean products are important, as are also sea foods, vegetables and fruits. It is worthy of note that milk is almost unknown as a food to the native population of China and Japan and some other eastern countries.

In considering the results of dietary studies it is also important to make comparisons on the basis of uniform body weight. This is particularly important in considering investigations in eastern countries as records show that not infrequently average weights are lower than is the case in the United States. As Oshima points out, some of the results of Japanese studies when considered on such a basis are in closer accord with American figures than is the case when this precaution is not observed.

Through the courtesy of one of the U. S. Government officials in Manila some data have been recently procured regarding the food of laboring men in the Philippines. The employer is expected to furnish rations in addition to wages, the regular ration

[1] U. S. Dept. Agr., Office of Experiment Stations Bul. 159.

allowance for a Filipino being 1.25 pounds of raw rice and about .5 pound of raw fish per day. In addition to this some fruit for instance bananas will also be eaten and perhaps other food, but this part of the diet is not supplied by the employer. As a rule the native laborers eat two meals a day, the first about eleven o'clock in the morning and the second at night. The average weight of the Filipino working man is 110 to 120 pounds, the latter figure being considered a fair average.

It is generally conceded that the Filipino laborers work steadily and well.

On the assumption that .5 pound banana would be eaten in addition to the rice and fish mentioned above, the ration would supply .154 pound or 70 grams protein, and 2,340 calories per day for a man weighing 120 pounds. It is customary to compare dietaries on a uniform basis of 150 pounds body weight. On this basis the Filipino ration would supply 88 grams protein and 2,925 calories per day, values which are lower than those called for by the suggested American dietary standards for a man at moderate work, namely, 100 grams protein and 3,500 calories.

The reports of the Commissary General of the U. S. Army for the last ten years have contained much information regarding Filipino food conditions, rations for native soldiers, and other similar topics. The ration allowance[1] for native soldiers when the Islands were under Spanish rule was rice .95 litre, jerked beef, .1 kilogram, vinegar .01 litre, lard .02 kilogram, "Mongos (mungo beans) .14 litre, coffee .01 kilogram, sugar .02 kilogram. The ration was varied by substituting .35 kilogram of fresh meat or .15 kilogram of fresh or dry fish for jerked beef.

Following the usual method of calculation and using standard figures for the composition of the food, this ration would furnish 81 grams protein and 2,406 calories of energy. If it be assumed that the average Filipino soldier weighs 120 pounds, the above values would be equivalent to 101 grams protein and 3,007 calories for a man weighing 150 pounds.

It is a general custom in deciding upon a ration under conditions similar to those in the Philippines to select foods which in kind and quantity conform to the ordinary dietary habits and which will supply the necessities rather than the luxuries. Assuming that this was true of this ration, the above figures

[1]Annual Report Acting Commissary General of Subsistence, 1900, pp. 28, 29.

would indicate that the ordinary Filipino is well nourished and that in proportion to his size his diet agrees rather closely with the commonly accepted dietary standards.

The Government official who supplied the data regarding Philippine laborers states that well-to-do Filipinos are hearty eaters and fond of meat, the quantities consumed at a meal being very large and that fat pork is a favorite dish. The numerous articles on Philippine dishes and Philippine cookery which have appeared since the Islands came into the possession of the United States bear out the statements regarding their fondness for meat and for foods rich in fat. This liking for fat food which is observed in the Philippines and which has been noted as well in discussions of diet in Cuba, Porto Rico, and other tropical and semi-tropical countries is interesting in itself, and also is another instance of popular misconceptions regarding diet, for the statement is frequently made that fat is not relished in the Tropics whereas the reverse seems to be the case.

St. Lawrence University, Canton, N. Y., has a School of Domestic Science in connection with the branch State Agricultural College established there by a recent action of the New York State Legislature. This is the first year of the Domestic Science course and there were thirty registrations of students who wish to teach Domestic Science. The original plan of the course was that it should be for home makers and the result in registration indicates that different plans will need to be made.

Home Economics Exhibitions. Workers in home economics will be interested in the *Women of All Nations Exhibition* at Olympia, September 1st to the 28th, 1909. The Domestic Economy Section is being arranged and organized by *The Epicure*. It is to contain the following sub-sections: (a) Exhibits of Domestic Economy Schools Illustrating Methods of Training in Domestic Subjects; (b) Demonstrations in Cookery; (c) Demonstrations in Sweet-making with Exhibits; (d) Inventions of Women tending to Promote Domestic Economy; (e) Literature; (f) Commercial Exhibits: Foods, Beverages, Cooking and Laundry Apparatus, Culinary Utensils and Appliances, etc. Applications for space should be made to the editor of *The Epicure*, 95 Wigmore Street, London, W., England.

Last summer an Exhibition of Home Work of Women was held at Frankfort-on-Main. The guide which was published would be of interest to persons concerned with the management of such exhibitions (Führer durch die Heimarbeit-Ausstellung, Frankfurt a. Main, 1908. Im Auftrag des Ausstellungs-Vorstandes bearbeitet von Earnst Schreiner. Kornsand & Co., publishers, Frankfurt a. Main).

FOOD OF MEXICAN LABORERS IN MEXICO AND THE UNITED STATES.

In an article entitled "Mexican Labor in the United States" by Victor S. Clark, Ph.D.,[1] considerable information is given regarding home life and standards of living food and diet of Mexican laborers. The general opinion expressed is that the Mexicans have a better, more generous, and more varied diet in the United States than in Mexico.

The following is quoted as the weekly ration of a family consisting of a man, wife, and children too young to work, living on a plantation in the extreme southern portion of Mexico where wages are relatively high and labor is scarce: Dried beans, 3.3 lb. rice 2.2, coffee 1.3, brown sugar 2.2, meat 6.6 lb., lard ½ bottle. After some correspondence on the subject it seems fair to assume that a half bottle of lard represents a pound. Assuming that this is the case, that the two children in the family were infants or very young and that accordingly they may be left out of account in the computations, the protein and energy furnished by the ration has been calculated in the usual way with the aid of average figures for the composition of the foods. The results show that the ration would furnish on the per man per day basis 77 grams protein and 1,671 calories of energy.

Such calculations as the above are of necessity lacking in accuracy, a fact which should always be borne in mind in making use of them. The values obtained, however, are of interest and without doubt give a fairly good idea of the diet. From general information regarding the Mexican diet collected from other sources it seems almost certain that chili peppers, tuna or other cactus fruits, and presumably some other similar foods were eaten in addition to the articles enumerated. If this was the case, the nutritive value of the diet would of course be correspondingly increased. The body weight of the man and his wife was not given and so it is not possible to recalculate the values given above to the basis of 150 pounds body weight.

It is noticeable according to Doctor Clark that Mexicans in the United States are very fond of meat though they have not been accustomed to much of it in their own country. One contractor

[1] U. S. Dept. Com. and Labor, Bur. Labor Bul. 78, pp. 466–522.

said of his laborers from Old Mexico: "They gorge themselves on meat."

Doctor Clark's report gives much information regarding the food habits and diet of Mexican laborers in the United States, their general living conditions, and related topics. In this connection it is of interest to recall dietary studies of Mexican laborers reported several years ago from the New Mexico College of Agriculture and Mechanic Arts by Professor Arthur Goss.[1] Professor Goss carried on three dietary studies of Mexican families in poor circumstances and one of a family in moderate circumstances, all living in Los Cruces, New Mexico, or in the neighboring country. In connection with this work he analyzed a number of typical food products and gives a considerable amount of accurate information regarding methods of preparing food, dietary habits, and general food conditions.

Considering the average results obtained with the four families, the diet supplied 94 grams protein and 3,550 calories of energy per man per day, at an average cost of 7 cents. The diet of these families was very simple, consisting principally of frijoles, or native beans, chili peppers, corn, wheat flour, and lard, with some vegetables, and in every case except one a little meat.

The following statements are made regarding the preparation of the food:

"In the houses of the poorer class the cooking is done in an open fireplace, usually in one corner of the room.

"The 'tortillas,' or cakes made of flour or ground corn, are one of the most generally and extensively used foods. When the tortillas are made from corn, the kernels are first boiled with lime, which softens them. The skin is then usually though not always removed, and the grain is ground in a crude stone grinding apparatus or 'metate,' consisting of a concave slab of stone and a smaller convex piece, which is held in the hands and which serves as a pestle. The grinding is not rotary, however, as in an ordinary mortar, but up and down, toward and from the body. The corn is usually a small blue kind, rather soft, which seems to contain somewhat more than the average amount of fat. After the corn has been ground into a mush on the metate it is patted out in the hands into the tortillas. Corn tortillas are never

[1] U. S. Dept. Agr., Office of Experiment Stations Bul. 40—Dietary Studies in New Mexico in 1895. U. S. Dept. Agr., Office of Experiment Stations Bul. 54—Nutrition Investigations in New Mexico in 1897.

rolled, as is the case with those made from flour. If flour is used, it is mixed into a dough with water and the cake rolled out from it. The flour used is not ground in the metate, but in the ordinary flouring mills. It is usually of poor quality, coarse and dark colored. After being worked into the proper form, the tortilla is baked on a flat piece of iron, supported directly over the fire in the open fireplace, the iron being first greased with lard. As soon as it is done on one side the tortilla is turned by pressing the moistened fingers against the upper side of it, thus causing it to adhere to the fingers, whereupon it is deftly turned and the opposite side is browned.

"The frijoles or beans are cooked in small homemade earthenware pots, and are almost invariably combined with a very liberal proportion of chili and also considerable lard.

"The chili is cooked alone, and also with various other articles of food. It is prepared by first removing the stems and seeds of the pods, which constitute somewhat more than half of the total weight, after which it is sometimes ground in the metate, but is usually soaked in water and the inner or edible portion separated from the outer skin by squeezing in the hands. Owing to the extremely strong irritating effect on the hands, this operation cannot be performed by an amateur. The Mexican women, however, become so accustomed to it that it seems to have no effect on them.

"Among the poor families the meals are served on the floor in the middle of the room, the family sitting on the ground around the food and eating without knives, forks, or plates.

"The houses of the poor people are usually supplied with skins of sheep and other animals, which serve both as chairs and beds for the children. When grinding corn and other articles in the metate and doing other kinds of housework, the women usually sit on the floor on these skins."—C. F. L.

The time indeed is at hand when systematic lectures on food will be a part of medical education, when the value of feeding in disease is admitted to be as important as the administration of medicines.—FOTHERGILL.

Myriads of our fellow-creatures have perished because those around them did not know how to feed them.—FOTHERGILL.

THE EFFECT OF COOKING ON CELLULOSE.

Since the illustration from König on the "Effect of Cooking on Potato," shown in Hutchinson's "Food and Dietetics," page 397, continues to reappear in new text books, it seems time that this authority should be challenged in print.

Some five years ago the writer found on examining a cooked potato, both boiled and baked, that no breaking of the cell walls had taken place. The middle lamella which holds the cells together had dissolved and the cells separated from each other. Every year since we have had classes try the experiment but have never yet found the cell walls to break. If, however, saliva is added to these unbroken cells, the starch filling them is very quickly digested, as shown by the fact that they no longer give the blue color with iodine, proving that the breaking of the cell wall is not at all essential for ease of digestion. While no broken potato cell walls have been found in the writer's experience, according to the results of Professor Gilmore of Cornell in results published in Farmers' Bulletin No. 244, (1906), the following statement is made:

"In cooking, mealiness is the most important consideration in estimating quality. In general, mealiness follows upon the presence of sufficient starch in the cell to rupture its walls when boiled in water. The grains of potato starch expand and coalesce when boiled in water, and if the walls are sufficiently full of these bodies the boiling will cause the cellular structure to be broken down, and a degree of mealiness is the result. When the requisite amount of starch is not present in the cell its walls are not broken down in cooking; hence the tuber retains its form or is soggy."

It would seem, then, that under some circumstances König is right, but by no means always. The potatoes examined have not seemed to lack particularly in mealiness.—EDNA D. DAY.

It is irritating, nay more, a deeply saddening problem for a wise dyspeptic to ponder, the superabundance in this little world of ours of things cookable, and the extreme rarity of cooks. —MAARTEN MAARTENS.

WOMEN'S CLUBS AND THE INTRODUCTION OF DOMESTIC SCIENCE INTO SCHOOLS

MAURICE LEBOSQUET
American School of Home Economics, Chicago

It is always interesting to trace the beginning of things, and oftentimes in investigating the beginnings of domestic science in the public schools, it is found that the local women's club has been instrumental in introducing the subject. Once started the work usually grows by reason of its very apparent value.

The following letter from Miss Emma A. Winslow, the teacher, tells how domestic science was introduced into the high school of Rutland, Vermont. The method and results are typical.

"A year ago the Women's Club offered to give the equipment for a cooking school kitchen and furnish the room for one year if the Board of Education would furnish a teacher and pay the running expenses. Although little enthusiasm was shown by the school officials, they decided finally to accept the offer.

"Two small adjoining rooms in the building where the rooms of the Women's Club were located, were rented and furnished to accommodate a class of twelve girls. The course was offered as an elective to members of the first year class in the high school and about fifty girls availed themselves of the opportunity. Two of the four classes have met on Saturday, the others meeting on school days.

"There has been increasing interest and enthusiasm throughout the year. At their June meeting, the School Board voted practically unanimously to continue domestic science as a part of the regular program and to fit up a room in the high school building for a kitchen. All but two of the ninth grade girls have signified their intention of taking cooking next year, and forty of this year's class wish to take up the second year's work. Much interest in the work has been shown throughout the state.

"The total cost to the Women's Club for starting the work has been about $150.00, most of which has been raised by lectures and entertainments. The room rent has been the largest item. The total cost of the equipment was $85.70. It is simple, but provides as much for each girl as is absolutely needed and as much as each would have in her own home.

"As the kitchen was only an experiment, we did not want to burden ourselves with too much expense. We found two long counters which had formerly been used in a music store and secured them for seven dollars. One contained four long shallow drawers and the other two. Each drawer was fitted up to accommodate two pupils and a class of twelve thus provided for. We had some difficulty in placing the counters in the room (9x12 ft.), and finally placed them against two walls. The gas connections were simplified in this way, but it made it somewhat hard to keep watch of the girls when at work.

"We also found at the second-hand store a large cupboard with glass doors which we bought for five dollars and used to hold the serving dishes and the extra cooking utensils. Then we bought for three dollars and a half a chest of drawers which the girls used to hold their aprons. This constituted our furniture, together with a dining table loaned to us and a small table (also loaned) which I used for a supply table.

"We painted the counters white and covered the tops with 'Sanitas' which I have found very satisfactory as it does not crack or peal. The cupboards were also painted white, and with dainty muslin curtains at the windows, we had a very attractive kitchen.

"Six gas hot-plates were placed on the counters and one large gas range provided. The Gas Company gave us free gas during the year. The sink was placed in the room by the owner and so made us no expense.

"The counters, supply cupboard and small table filled one room. The other one contained the sink, large stove and large table and chairs in which the girls sat while I was outlining the lesson.

"I had more individual equipment than I should have had if the drawers in the desk had not been so roomy. Each girl had a white bowl, two measuring cups, a case knife, fork, two tablespoons and two teaspoons. Each drawer also contained a rolling-pin, wooden spoon, egg beater and utensil plate to be used in common by the two girls. The double boilers, sauce pans, baking tins, etc., I kept in the cupboard and also all the serving dishes. The total cost of the dishes was about twenty-five dollars. In detail the cost of the equipment was as follows:

COST OF EQUIPMENT, KITCHEN LABORATORY, HIGH SCHOOL, RUTLAND, VERMONT.

Furnished by Rutland Women's Club.

1 Counter with four drawers (work table for 8 girls)	$4.00
1 Counter with two drawers (work table for 4 girls)	2.50
1 Cupboard, glass doors above, (for supplies)	5.00
1 Desk, with four drawers, (for aprons)	3.00
Carpenter's work repairing counters, etc	3.72
Painter's bill, painting furniture white	6.60
5¼ yds. "Sanitas" to cover counters, etc	1.38
8 yd. dotted muslin for sash curtains	1.20
1 Gas Range $17.50; 4 Hot Plates, $5.00; Piping, $8.00	30.50
Crash for towels and dish cloths	2.94
Set of cooking utensils for 12	24.86
Total cost	$85.70

Details of Cooking Utensils for Class of Twelve.

Individual (kept in desks)	
2 doz. tablespoons @ 40c	$ .80
2 " teaspoons @ 25c	.50
1 " knives and forks @ 75c.	1.50
6 wooden cake spoons @ .08	.48
2 doz. measuring cups @ .05	1.20
6 biscuit cutters @ .05	.30
6 salt dishes @ .03	.18
6 small strainers @ .05	.30
6 small platters @ .05	.30
6 large platters (utensil plates) @ .10	.60
12 white bowls @ .05	.60
3 rolling pins @ .15	.45
3 Dover egg beaters @ .10	.30
Utensils (kept in cupboard)	
Upper shelf.	
12 plates @ .10	1.20
6 oatmeal dishes @ .10	.60
12 cups and saucers @ .10	1.20
6 tumblers @ .10	.60
1 large pitcher @ .10	.10
6 pop over cups @ .05	.30
3 large yellow bowls @ .15	.45
1 lemon squeezer @ .10	.10
1 large strainer @ .10	.10
4 paring knives @ .10	.40
2 flat egg beaters @ .05	.10
1 potato masher @ .10	.10
1 ricer @ .10	.10
1 apple corer	.10
1 can opener	.10
1 butter cup and brush	.10
1 nutmeg grater	.05
Bottom of upper cupboard	
6 small agate sauce pans @ .16	.96
6 larger " " @ .20	1.20
6 small double boilers @ .55	3.30
1 large " "	.85
2 flour dredges @ .10	.20
Upper shelf in lower part of cupboard	
2 flour cans @ .10	.20
1 sugar can	.10
6 agate wash basins (for dish pans) @ .10	.60
6 agate pans (for rinsing pans) @ .10	.60
Lower cupboard	
1 dripping pan	.25
1 meat rack	.20
3 layer cake tins @ .06	.18
2 square " " @ .10	.20
3 bread tins @ .10	.30
3 pie " @ .06	.18
2 sheets cup cake tins @ .15	.30
1 large frying pan	.15
3 small " " @ .05	.15
2 large agate saucepans @ .40	.80
1 " " kettle	.35
1 steamer	.40
1 colander	.15
1 1-qt. baking dish	.30
1 large jelly mould	.35
1 cookie sheet	.25
1 chopping bowl	.15
1 " knife	.15
1 broiler	.10
2 pan cake turners @ .05	.10
Miscellaneous	
2 "Magic" covers @ .50	1.00
1 teakettle	1.50
1 scale	1.25
1 sink strainer	.25
1 garbage can	.85
	$31.08
Less 20% discount	6.22
	$24.86

"Just this plan for a cooking school kitchen would probably not be adaptable under all circumstances, but it has met our needs well this year and paved the way for an ideal kitchen next year."

Without doubt much of the success of this cooking course was due to the teacher, who is a graduate of Simmons College. A resourceful teacher can accomplish a great deal with any kind of equipment, but this is not saying that better work cannot be done in a first-class cooking laboratory. Surely the teaching of domestic science calls for as good an equipment as is needed for teaching chemistry satisfactorily.

Although domestic science has been widely introduced in the public schools during the last few years it seems sometimes that its progress is unnecessarily retarded by the lack of a compelling force to voice the need. There are no commercial interests to profit by the extension of home economics education—only the homes of America. The home makers of America are a tremendous force, however, and often this force can be exerted most effectively through the Women's Clubs. Much has been done in extending home economics by the Women's Clubs—much more remains to be accomplished.

Proposed State School of Health. The success attending a course of lectures on sanitary science and public health now being given at Cornell University under the joint auspices of the University and the State Department of Health, has led to the framing of a bill, which calls for the establishemnt of a State School of Sanitary Science and Public Health at Cornell University. In the bill the general purpose of the School is stated to be "to aid in acquiring practical knowledge and in diffusing useful information on subjects relating to sanitary science and public health among the people of the State of New York, and to promote scientific investigation and research respecting the principles and application of sanitary science."

Cleveland Association. The Domestic Arts Association, Cleveland, Ohio, has issued a booklet containing its program for 1908–1909 with its list of members and constitution and by-laws. Its membership numbers only about twenty-five, according to the list, but its program shows a well organized and useful plan of meetings. Monthly meetings are provided with topics having to do with the social aspects of the home. Topics of its meetings for the year have been as follows: Family Life Among Animals, Miss Huntington; Marriage in Primitive Life, Miss Isla Campbell; The Family Clan, Miss Mary J. Hunter; Contribution of the Home Industries to the Arts and Sciences, Mrs. Alice G. Kirk; Family of the Present, Miss Nellie Clendon; and The Future of the Home, Mrs. Ada B. Williams.

EDITORIALS.

The Literature of Home Economics.

When one speaks of "the literature of home economics," one thinks at once of the wealth of new books which are coming out in this field. One should not, however, lose sight of the books of the past, especially those which deserve to be termed classics because of general currency and long pre-eminence. There is another type of older book, too, which unlike the classic book passes usually into obscurity, namely, the first scientific efforts in any field which with the progress of knowledge are usually forgotten. The JOURNAL presents this month articles on books of both these types. The *Physiology of Taste* by Brillat-Savarin, will probably keep its place as a classic, along with the works of Miss Beecher to use an American illustration, or, to quote the most prominent example of all, Xenophen's *Oeconomicus*. The article on Caleb Tichnor, refers to the work of a scientific beginner in this field. We may each find courage or humility as needed in the fact that men and women have for generations worked at the problems of living that confront us; and again all may gain a wider outlook as well as a satisfying charm in world books like that of the brilliant Frenchman or the philosophic Greek. From time to time, the JOURNAL will publish other articles on the old time literature of home economics which will, it is hoped, be of continued interest to its readers.

The College Course.

The course of study of women's colleges was a matter of discussion in the first Lake Placid Conference on Home Economics over ten years ago, and the colleges were urged to give a place in their curricula to subjects concerned with daily living and the household. Since then real progress has been made in many colleges. That the contest for progress is not yet ended, is indicated by the following note: "The New York Branch of the Association of Collegiate Alumnae has this year been making a study of the deficiencies of the college curriculum in the lines of hygiene, both personal and public; the development of the child; the family; and political science and the elements of law in the direction of helping toward more intelligent citizenship. The

Branch is studying what is desirable and possible to introduce into the college curriculum, with the idea of emphasizing the responsibility of the college man and woman, to render service toward the public good, and to fit the individual to render it more intelligently." Persons who are especially interested in this problem, or who can make contributions to the investigation, will do well to communicate with those in charge of the study.

Traveling Schools in Domestic Science. There appear elsewhere in this issue, two references to traveling schools of home economics. The Department of Agriculture of North Carolina has for two years maintained a Domestic Science Car, which is moved about the State and is used for demonstration lectures and other instruction in domestic science. The article on "Traveling Schools of Cookery in Germany" suggests another way in which the teachings of home economics are being brought home to the people. In agricultural education, the use of the railroad car has come to be quite common. The States of Maine, Massachusetts, New York, Pennsylvania, Maryland and Iowa, and doubtless others, are now using railroad cars for this purpose. The widespread adoption of this method in the field of home economics seems desirable and workers in home economics in the various States, not only those in educational institutions, but their co-workers in the women's club movement, might well take up this question with the State authorities.

Executive Committee. The Executive Committee of the American Home Economics Association has now been completed by the election, by the Council, of five of its members to serve with the elected officers as the Executive Board of the Association. The Executive Committee as now made up, includes the following persons: Mrs. Ellen H. Richards, President; Miss Isabel Bevier, 1st Vice-President; Dr. C. F. Langworthy, 2d Vice-President; Miss Mary Urie Watson, 3d Vice-President; Mr. Benjamin R. Andrews, Secretary-Treasurer; Members from the Council : Miss Helen Kinne (for one year); Miss Emma S. Jacobs (for two years); Miss Caroline L. Hunt (for three years); Miss Mary S. Snow (for four years); Mrs. Alice P. Norton (for five years).

Denver Meeting. Plans are making for the meeting of the American Home Economics Association at the Denver Convention of the National Education Association, July 5–9. The arrangements have been put in the hands of a committee composed of Miss Edna D. Day of University of Missouri, Miss Rosa Bouton of University of Nebraska, Miss Mary F. Rausch of Colorado Agricultural College, Fort Collins, Miss Gertrude Vaile, 1610 Emerson Ave., Denver, Colorado, and Miss Minna A. Stoner of University of Wyoming. Home Economics teachers of the West should plan to attend the Denver meetings. Details of the program will be published in the June issue of the JOURNAL OF HOME ECONOMICS.

Nutrition Investigations. The Agricultural Appropriation Bill which was enacted at the close of Congress, provides as follows regarding the nutrition investigations which have been carried on under the Office of Experiment Stations of the United States Department of Agriculture:

"Nutrition Investigations: To enable the Secretary of Agriculture to investigate the nutritive value of agricultural products used for human food, with special suggestions of plans and methods for the more effective utilization of such products for this purpose, with the co-operation of other bureaus of the department, and to disseminate useful information on this subject, including rent and the employment of labor in the city of Washington and elsewhere, and all other necessary expenses, ten thousand dollars."

This provision will be gratifying to all who know of the valuable work which has been carried on by this division of the Department of Agriculture in increasing the fund of human knowledge regarding human nutrition and in disseminating popular information on this subject.

Men as Cooks. The *Illustrated London News*, American edition, February 6, 1909, contains a reference to the recent Food and Cookery Exhibition in London, at which cooks from various institutions and from the Army and Navy, took part in competitions. The Army Council provides for the exhibtions a silver challenge shield for military hospital cooking, which was won this time, by the men who cook for the Millbank Hospital. Naval cooks won 946 out of a possible 1000 marks in their competitive work. The article closes with the comment that the serious attitude toward cookery which these men take is all quite as it should be.

THE NATIONAL HOUSEHOLD ECONOMIC ASSOCIATION 1893-1903.

MRS. LINDA HULL LARNED.

The famous Women's Congress of the Chicago Exposition of 1893, awakened the public mind to the fact that matters pertaining to the household, had not kept up with the procession of progress. Therefore, a day was appointed in which to investigate this neglected science and the result was the organization of an association aimed to benefit the home makers of this country and to be National in scope. The organization took as its name, The National Household Economic Association, and Mrs. John Wilkinson of Chicago, was elected its first president, and Mrs. Ellen M. Henrotin, honorary president. Mrs. Wilkinson proved a most efficient and executive leader, and with the assistance of Mrs. Henrotin and many other well known women was able to induce the Women's Clubs of the country, to take an active interest in all education pertaining to the betterment of the home. The Association planned to work especially through women's clubs. The objects as declared in its constitution were as follows:

"1. To awaken the public mind to the importance of establishing bureaus of information where there can be an exchange of wants and needs between employer and employed, in every department of home and social life.

"2. To promote among members of the Association a more scientific knowledge of the economic value of various foods and fuels, a more intelligent understanding of correct plumbing and drainage in our homes, as well as need for pure water and good light in a sanitarily built house.

"3. To secure skilled labor in every department of our homes and to organize schools of household science and service."

Mrs. Wilkinson was followed as president, by Mrs. Ellen Harbart, of Illinois, and Dr. Mary E. Green, of Michigan, succeeded Mrs. Harbart as president. By this time the organization had become generally recognized through the efforts of State vice-presidents who in turn presented the subject and supplied literature to the clubs and educational institutions of their representative states. During Dr. Green's presidency, Household Eco-

nomics was given a place on the program of the conventions of the General Federation of Women's Clubs, and also at many of the meetings of the State Federations. Dr. Green was called upon to speak at these meetings as also were many other workers in the field. The subject met with an enthusiastic reception at the Denver Biennial of the General Federation, and the women throughout the West were ready to enlist in this new, yet very old, enterprise. Mrs. Larned, of New York State, succeeded Dr. Green and under her régime the subject found favor at all the Biennial conventions during the four years that she was in office, and no less than thirty-five States, as well as Canada, were represented by vice-presidents. Mrs. Larned not only presented the subject at these National and State meetings, but was invited by Mr. Peck, our Commissioner to the Paris Exposition, to take part in the series of Congresses that were held in the Palais de Congress during that summer and was given a prominent place on the program of Women's Works and Institutions at this Congress.

The Association held its annual meetings during the ten years of its existence, in different states, and at the invitation of local organizations, its last meeting was held in Toledo, Ohio, October, 1903. As by this time the objects and aims of the Association had become thoroughly incorporated in the work of the General and State Federations of Women's Clubs, and as the Lake Placid Conference was now doing much better work along the same lines, it was decided at the Toledo meeting to merge the work of the Association into that of the Committee of Household Economics of the General Federation of Women's Clubs. The following year the first report of a committee on Household Economics was made at a General Federation Convention, at the meeting in St. Louis in 1904.

The National Household Economic Association published and circulated annual reports containing summaries of work and progress in the States, and from time to time, published Outlines of Study, and also addresses of importance given at its annual conventions. The Association was entertained two or three times in Chicago, and once in Atlanta, in Toronto, in Buffalo, in Milwaukee and Toledo.

There are now many schools of Domestic Science in flourishing existence which owe their inspiration to the efforts of the

workers in the National Household Economic Association, and in many towns and cities it was more or less instrumental in introducing manual training and domestic science for girls in the public schools. It may well be regarded as one of the most important movements which paved the way for the American Home Economics Association.

Food in Chinese Turkestan. In an article entitled "The New Province Two Thousand Years Old," by E. Huntington, in Harper's Magazine for December, 1908, which is descriptive of the author's travels in Chinese Turkestan, considerable information is given regarding the food habits of the people and the effects of their food on their general condition and efficiency.

For over 2,000 years the Chinese have been the dominant race in this region though their political supremacy has been lost at intervals and then regained. The mountain regions are inhabited by Khirghiz nomads who have large herds of horses, cows, sheep, and goats, and according to the author are generous users of meat and milk in their diet. These people are strong, vigorous and decidedly superior in these qualities according to his statements to the Chantos who are the chief inhabitants of the plains—"a weak-willed people, pleasant and easy to deal with, but lacking the stronger virtues, and sadly prone to all manner of self-indulgence." The Chantos grow large quantities of peaches, nectarines, apples, etc. As regards their food habits, the author states that "instead of the milk and meat of the mountain nomads, fruit in enormous quantities, with bread, rice, and vegetables, formed the diet of the people."

The Chinese in this region follow their usual food customs. "It is amazing to see how high the civilization of the Chinese appears in contrast to that of the natives. At a Chanto meal one sits cross-legged on the mud floor, and all the guests eat from a single dish of rice in the middle of a cloth. To go, as I several times did, from such a repast to a sumptuous Chinese dinner of thirty courses, . . . and to find the meal served on a polished wooden table surrounded by chairs and set with individual bowls and chop-sticks, makes one realize how far Chinese civilization has advanced beyond that of neighboring races. Much more impressive, however, is the deference of the Chantos to the Chinese—a deference which is obvious even when the people speak with bitterness of their rulers. . . Such an attitude on the part of a subject race is only possible when the rulers possess a high degree of strength of character." It would appear from the author's generalizations that the Chantos who live on fruits, cereals, etc., rather than the generous, mixed diet of the Chantos or the Khirghiz diet, characterized by an abundance of meat and milk, lack their energy and vigor.

On the basis of data presented it would be obviously unfair to attribute such differences solely to differences in diet, but the material presented is of decided interest as a contribution to the subject of the possible influence of racial food habits on race condition and achievements.

IN THE TEACHING FIELD.

Round Table at Washington.

On the morning of New Year's Day, 1909, a Round Table on Domestic Science was held in one of the parlors of the Hotel Gordon; Miss Kinne, as former Chairman of the Teaching Section, presided.

The meeting was well attended and was representative of several sections of the country and several lines of work, though most members of the Conference present were teachers of domestic science. The subject under discussion was Domestic Science in the High School Curriculum, and more particularly in its relation to College Entrance. There were some slight differences of opinion, but on the whole the meeting was agreed in regard to the following points: First, that high school teachers of domestic science should agree on a course for college entrance, which could be put into the college preparatory high school; second, that this course should be intensive, dealing thoroughly with some one subject say, foods—only in this way can the work be made sufficiently weighty from the college point of view; third, that it would be well if possible to have at least one year's work, to be taken by the girl who is to enter college and the one who will not; this would make for economy in the school curriculum and in the teaching force. There was some difference of opinion here, some of the teachers present thinking that this was not possible.

A very pleasant feature of the meeting resulted from a suggestion made by Dean Arnold of Simmons College, that every person present should give her name and tell something of her work. This developed the fact that the gathering was very representative of the domestic science field. Informal discussion followed among the members of the Committee on College Entrance Requirements of the Teaching Section of the Lake Placid Conference, although this committee had been formally discharged. The result of these conferences and later correspondence will be published in the June number in the form of a definite proposition for a course of the kind indicated above.

Open Questions in Teaching Method.

At the Washington meeting of the American Home Economics Association, it was suggested that teachers of home economics, or household arts, need most at present to discuss methods of teaching rather than courses of study. It is with this thought in view that this column is opened.

The JOURNAL should certainly afford opportunity for discussions through correspondence of many vital matters in regard to method, both theoretic and practical. All interested members of the Association are invited to take part in the discussions, by letter, and to propose new questions for discussion. A few practical questions follow as the opening of this department:

In cookery, one most important question is perhaps that of laboratory management and its relation to cost of maintenance. This connection may not be obvious at first, but through the attempt to lessen the cost of materials to the school, teachers have resorted to group work, where several pupils work together upon one dish, or in individual work, to small quantities. If these quantities are too small, the training is not practical. This is especially true in batter work, for instance. In group work the pupils of course miss the opportunity for individual training. Either of these methods will reduce the cost per capita per lesson, either in the elementary or high school, to two cents. In one of our large cities where the small quantity method is used, the cost per capita is as stated. The same cost per capita is given by the supervisor of another large city system where the group method is largely used. If either of these methods alone can reduce the cost to two cents per capita, surely some wise combination of the two, might have the same result. It is in the batter work, as already noted, that individual work gives the pupil opportunity to develop skill; yet a normal quantity is costly, therefore, here it might be wise to have one or two lessons of the individual type, and others of the group type.

It is necessary, for two reasons, to make expenditures low; in the first place, to make it possible for School Boards to introduce and maintain the work, and in the second place, to teach economy in the use of materials to the pupils.

Work in cookery costs more than in the other branches of domestic science work, and perhaps the supplies are more per capita than any other work in the school; yet while practising

economy, domestic science teachers should contend against an appropriation so limited that the work is actually crippled.

There are several ways in which this burden of maintenance can be lightened to the school. In many of our training schools and colleges a laboratory fee is paid by the students. But it is in the use of some commercial plan that the best solution of this difficult problem may be found. By commercial, is meant some plan which involves the selling of the cooked products, either in a lunch room or to individuals. It is interesting to note that varied forms of this method are already in existence in different parts of this country. In addition to the fact that by selling products the appropriation is increased, there are two strong arguments in favor of this plan; in the first place, it gives the pupil opportunity to work with normal quantities which is certainly most desirable, and in the second, it familiarizes her in a practical way with the cost of food materials and with the market value of her labor.

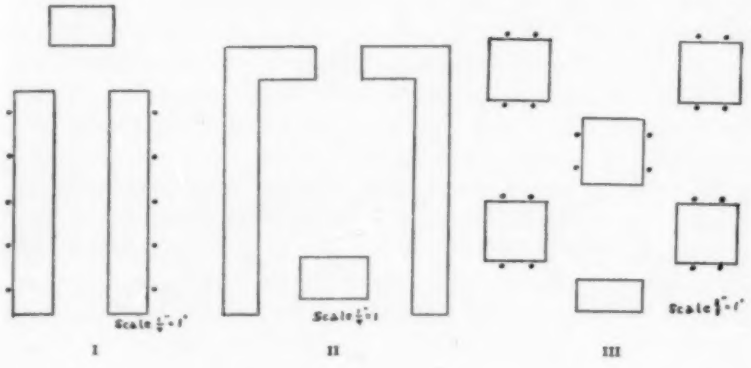
At the School of Practical Arts, Boston, Massachusetts, one cent per capita per lesson only is allowed by the School Board. Miss Annie L. Bennett, the Director of Domestic Science, says that this is not a sufficient amount to allow material for practical training; therefore, Miss Bennett has devised a school lunch scheme by which the dishes prepared in the cookery classes are utilized for the luncheon. The pupils gain much in experience both in preparation and in a knowledge of the cost of food. In this way too, the quantities are sufficiently large to induce the dealers to allow a discount.

At the Hebrew Technical School for Girls, New York City, Miss Anna Hedges, Director, a somewhat similar plan is followed. In this school the senior girls prepare a daily luncheon for the teaching staff, each teacher paying fifteen cents for her luncheon. Cooked food is also sold to friends of the school and to pupils. In these two ways, the actual outlay to the school is reduced to three cents per pupil per month. Here, certainly, are problems for discussion. The following definite questions are propounded:

1. How may individual and group work be wisely combined?
2. What other schemes resembling those in the two schools mentioned are already in operation and with what success?
3. Are there any possible objections to this financial scheme, and what?

Cooking Tables. The accompanying illustrations were received too late to appear with the discussion of "Adequate Equipment for Domestic Science" in the November *Preliminary Bulletin*. The illustrations are therefore given here and the paragraph on cooking tables having reference to the illustrations is repeated.

"Simple tables can be made by a local carpenter at comparatively small expense. If great economy is necessary, the common wooden kitchen table can be used, either old or new, or stained packing boxes. Wooden horses, with movable boards



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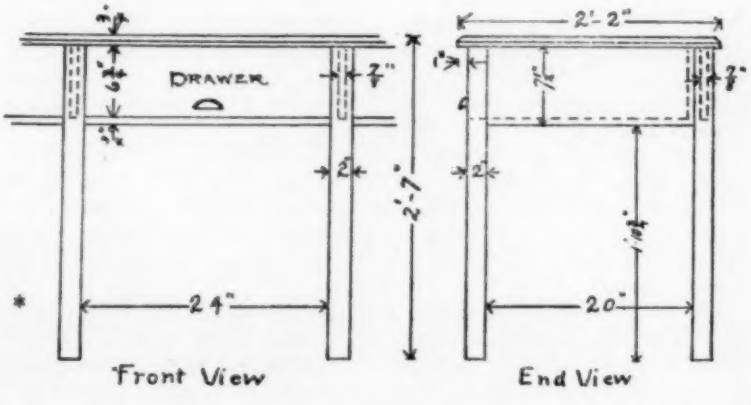

IV

*Minimum space for each pupil.

on top, have been tried successfully; such simple arrangements are desirable in introducing the work. If tables are to be built in, as is common in permanent equipment, various floor plans are possible. Two parallel tables (I) are convenient in a rather long and narrow room, and secondly, in a room where serving is to be done as well as cooking. The cooking in such a place can be done at one side of the room, and the serving at the other. A rectangular arrangement (II) is a good one for a large class, since the instructor is able to stand in the center and have supervision of all the tables. The arrangement of tables in a group (III) often economizes space; it makes many more steps for the teacher, however, and makes it more difficult for her to keep in touch with all the tables. The shape and size of the room and the size of the class will usually determine the arrangement of tables, but in general the rectangular form is recommended for elementary and secondary schools. Twenty pupils to a table are considered desirable. A working drawing (IV) of a table unit is presented, 31 inches high, 24 inches wide, and 26 inches deep, with a 6¾ inch drawer for utensils. Maple tops and ash frames make a good combination, or cheaper wood below. Oak may be substituted for maple. An estimate in New York for building twenty such units in rectangular form was $100. Prices will doubtless vary elsewhere."

University Dissertations. The following original studies in the fields related to home economics appear in doctors' dissertations for the degree of Doctor of Philosophy in the American universities last year. The list in full is printed in *Science*, September 18, 1908.

Yale University—Stanley Rossiter Benedict: "Experimental studies on the Metabolism of Magnesium and Calcium."

George Washington University—Frank Cummings Cook: "Phosphorus Metabolism Experiments."

University of Missouri—Charles Brooks: "The Fruit Spot of Apples; a Morphological and Physiological Study;" Caroline McGill: "The Structure of Smooth Muscle in the Resting and in the Contracted Condition."

Columbia University—Elmer Ellsworth Jones: "A Comparison of Mental States in the Horizontal and Vertical Positions of the Body;" Matthew Steel: "The Influence of Magnesium Sulphate on Nitrogenous Catabolism in Dogs, with Special Reference to the Distribution of Nitrogen among the Constituents of the Urine."

University of Chicago—Clarence Stone Yoakum: "An Experimental Study of Mental Fatigue."

DOMESTIC SCIENCE MEETING AT CLEVELAND.

NORTHEASTERN OHIO TEACHERS' ASSOCIATION.

The Northeastern Ohio Teachers' Association met at Cleveland, February 12–13, 1909. There were three general sessions, and in addition, twenty-five or thirty departmental meetings. Among the latter was the departmental meeting on Domestic Science and Domestic Art, which was held at Central High School. About 30 Domestic Science teachers were present and enjoyed a very interesting meeting. The leader was Miss Carlotta C. Greer, of Cleveland. The program included the following papers: (1) The educational value of domestic science, Miss Rachel H. Colwell, Lake Erie College, Painesville. (2) Teaching chemistry as applied to domestic science, Miss Mary Converse, Technical High School. (3) Bettering of taste in dress and house furnishings through domestic art, Miss Lana Bishop, Technical High School. (4) The influence of domestic science on society, Miss Esther M. Howland, Cleveland. Abstracts of these papers follow:

THE EDUCATIONAL VALUE OF DOMESTIC SCIENCE.

Miss Rachel H. Colwell.
Lake Erie College.

From a consideration of the place of Domestic Science in the general scheme of education a broader view may be obtained of its possible significance, and having established the larger claim, the adaptation to special needs will follow the more readily.

Education is a process of evolution. The child should be the unit around whom the education centers, and culture, true culture, the attainment. The practical application of these ideals means a better knowledge of our subject. We are in a new field. We need the scientific attitude of mind and scientific methods. Better teaching would result from clearer thinking. A few fundamental principles established in the mind of the child by a greater variety of examples, is better than a smattering of many. The child should have purpose and understanding, be taught how to do his own thinking. The made dish is not an end in itself. Why not have a clear cut working outline for the various ways of cooking all vegetables which is applicable

to each, with certain modifications which can be shown, instead of a special recipe for each? Having established the common methods of cooking the potato for instance, have the common methods of cooking the sweet potato any fundamental differences which can not be explained by reference to its composition? The very explanation helps to fix the differences in food value, and so on through the roots, bulbs, stems, leaves, flower and seed. Is it not after all a study of relative values of the foods which gives to each food its proper place? May the question be left, do we see and make use of the full educational value of our work?

BETTERING OF TASTE IN DRESS AND HOUSE FURNISHING THROUGH DOMESTIC ART.

LANA BISHOP.
Technical High School, Cleveland.

How to influence for good taste in dress and house furnishing is a great problem. Each girl whether she is to enter the industrial field or become the head of a home, should receive such training as will enable her to meet and solve intelligently the problems which will come to her from time to time, not only from the practical standpoint, but from the economic and artistic side as well.

Good taste in dress is the faculty of being able to select and combine such materials, and to so adjust them to the figure, as to produce a perfect harmony.

Common sense should overrule the aspirant to successful dressing. Fashion often leads us far astray from the path of refined taste, and the prevailing shapes and colors must be modified according to the individual style and personality of the wearer or the results will be unsatisfactory to herself and to the friends whom she wishes to please. We are told that Queen Alexandra of England, is the best dressed woman of today, and why? She has made a study of what is most becoming to her as an individual, and no matter what is fashionable, she chooses that which is adaptable to her particular style. Our best designers of gowns find most inspiring examples of color and designs for costumes, in the world's great picture galleries, where priceless portraits painted by old masters are hung.

Since our comfort and peace of mind depend largely upon our surroundings, the home should be a haven of rest. The old idea

was that a beautiful home must necessarily be expensive and elaborate, but we now agree with the Japanese in his ideas of what is good in household art, and have learned to appreciate true beauty in simple things. In the study of house decoration, as well as in the study of dress, we take into consideration the fitness to purpose, simple line, color combinations and appropriate materials. Each room in the house should receive careful thought making the whole a harmonious color scheme.

How can we, through Domestic Art teaching, help the girls to appreciate this? Begin early with the very young children, working out simple problems, regulating the work according to the age, and gradually cover all the general principles, opening to the girls, step by step, as they grow older, that side of life which rightfully belongs to them. Give them the interesting history of textiles from the prehistoric ages, from the origin of tools to the present system of factories, where thousands of yards of materials are made daily; show them how to sew in all ways from the coarse stitches on canvas to the finest of French embroidery; teach them how to buy by making them familiar with all kinds of fabrics; help them to appreciate good design through their study of color, line and form and their application to materials.

The grace that comes from a mind trained to appreciate real beauty in simple things is what all women should secure. A woman who has secured this is a success both in the home and in society.

A great deal of attention should be given to the girl who is to become one of the great army of industrial workers. According to recent reports, there are 6,000,000 women in the United States who are gainfully employed. We find that in 72 of the 78 cities having 50,000 inhabitants, more than one-third of the girls between 16 and 20 years of age are at work. In 36 of these cities more than one-half are earning their living, and in eight the rate rises as high as 69% and even 77% of the total number of girls. Nearly all occupations are open to them, and many industries which require skilled labor depend upon women for their finest workmanship. Although among this army of young women workers, we find many trained for their various lines, a large majority are in the unskilled class and perhaps have begun as cash girls or errand girls when only fourteen years of age. If a girl is unusually bright, she may rise to a good position, but in

many cases the wage continues low in the scale and the results are sometimes serious. The mind of the young girl is susceptible to all sorts of temptations, her taste is undeveloped and her judgment is crude. Her desire to dress as other people do, leads her to buy beyond what she can afford, or to select inappropriate materials far removed from the artistic lines a person of more mature or trained mind would choose.

Employers are calling for trained workers in dressmaking, millinery and power-machine operating trades, and other skilled occupations for women, but the number ready to respond is small. The apparent need for a place where girls could receive such training led to the establishment of the Boston Trade School for Girls in 1904. Two years previous the Manhattan Trade School in New York was started and it had grown to be very strong in its work—a model well worth copying. In the main the two schools are much the same, but owing to some differences in trade requirements of the two cities, certain lines are emphasized more in one than in the other.

These schools have proven their worth over and over again. It is impossible to estimate its value to the pupil or to the employer. At first employment was sought for the girls, now they cannot be trained fast enough to meet the demand. As the girls go out into the trade, an influence for better physical, moral and economic conditions among the industrial workers is gradually making itself felt, and life to the girls themselves is much happier for their having had a training at the trade school. In such trade schools, there will be opportunities to enforce the standards of good taste.

Our work in Domestic Art must be broad, dealing with all phases of the subject, influencing for better conditions in all places, and teaching the girls how to live in their particular environment.

TEACHING CHEMISTRY IN CONNECTION WITH DOMESTIC SCIENCE.

MARY CONVERSE.

Instructor in Applied Chemistry, Technical High School, Cleveland, Ohio.

In technical high schools there is a tendency to emphasize practical work, which for domestic science means actual cookery; yet as theory and experiments are a necessary foundation, work in science and in chemistry is being added to the curriculum.

"The aim of this course is, primarily, to train the girl to efficiency; secondarily, to make a correlation point for other studies, to force their application in the common affairs of life and to cause the school to function immediately in daily life." Chemistry as applied to the teaching of domestic science is still in a primitive state, but as time goes on the benefit and necessity of it will become more evident. Chemistry as given in the usual high school course applies more to the practical work of the boys than girls. A certain amount of general chemistry is necessary for the girls, particularly that which will be of assistance to them in connection with their work in domestic science, and this can be given as applied chemistry.

For instance, when combustion is being studied in the domestic science laboratory, experiments can be given in the chemical laboratory on the generation of oxygen and nitrogen, showing their effect on a lighted candle and proving the necessity of oxygen in combustion. Kindling point can also be emphasized and this point determined with the use of kerosene or gasolene and the thermometer. The Fahrenheit thermometer is better than the Centigrade for this purpose as it is commonly found in the home. If the Centigrade must be used then the work of transfering the Centigrade scale to Fahrenheit can come in connection with their work in mathematics.

While carbohydrates are being studied in the domestic science laboratory, work along the same line is given in the chemical laboratory, for instance, detection of starch in vegetables, effect of soaking in water for a time, composition of cereals determined, and experiments on sugar. While studying the different foods, their preparation for market, cost, digestion, etc., is taken up.

With fats it is possible to include testing for adulterations and determining the best for use in deep fat frying. Proteins are taken up with a study of eggs; and of milk with testing for composition, quality and adulterations. Determination of fat by the Babcock method and action of rennet on milk are given. Meat is studied with regard to the effects of heat and cold, hot and cold salted water and the extraction of food principles for soup making, etc. Gelatine, legumes, food adjuncts, etc., also have their place in the work. Tests on flours, breads, baking powders and other materials are made for adulterations as well as to find their composition. Tests with antiseptics, preservatives

and the action of alkalies and vegetable acids on metals are included.

This is a very brief statement of the course in applied chemistry now being given in the technical high school in Cleveland. Not only does the application of applied sciences vivify the work of domestic science, but the student gains new appreciation of the value of these subjects.

THE INFLUENCE OF DOMESTIC SCIENCE ON SOCIETY.

ESTHER M. HOWLAND.

Domestic science as a social factor may, I think, be considered to be effective in three ways: First in the development of general social efficiency; second, in the contribution to the social life of the school; and third in its direct effect upon the home. The special value of domestic science, and we should include in this the study of food, clothing and shelter, depends upon the fact that it deals with the environment and touches the whole round of human life.

Recent examinations of school children in various cities of England and America has revealed a state of physical ill being most deplorable. Nutrition, the first point of inquiry, is indicative of all other functions of the body. Many a child is punished for laziness and irritability, who really ought merely to be nourished into energy and good temper. These results show that food, which is absolutely essential to life, is also an important factor in right living.

The socializing movement is well under way but there is a lack of correlation between the school and the needs of industrial and social condition in some towns. There is, for example, too little education for the factory girls who are in sore need of it both for their own good and for the good of the community.

Housekeeping in the widest sense, the provision of domestic comfort within the home, is the largest single industry known. Yet it is an accepted fact that being born a woman is not being born a housekeeper, and she needs the wisest training we can give to fit her for the most responsible position she can ever hold, that of wife and mother.

In conclusion I would like to tell about the home science work that has been so successfully carried on among the working men's wives in Waterbury, Connecticut, by one of the instructors of

the Waterbury Institute of Craft and Industry. Each class is limited to twelve members and is composed of the women in the neighborhood. These classes are held in their own home kitchens and they are allowed to bring their infants and small children and thus are able to care for them during the class session. A two-hour lesson is held once a week and a charge of five cents is made and out of this the supplies are purchased for the lessons. The object of these lessons is to teach these married women how to make their homes more attractive and homelike and the proper way of living. The course includes: The care of the home, the care and feeding of children, home nursing and how to buy and prepare food by simple, healthful and economic methods. In most of the classes the members have been most enthusiastic and they have appreciated what they have learned. One husband is reported to have said "It's a pleasure to come home now, knowing we will have a good hot meal."

These women have also been benefited by the social side of these lessons. More than one has said, "This is the only time I go from home during the week." One woman said, "I can't tell you what this class has done for me. Besides all I have learned about cooking, I've made the acquaintance of these women in the church and through them have joined the Ladies' Aid Society and have taken a class in Sunday school. Indirectly, it has brightened my whole life."

We are able to see some of the results of such teaching, but I am sure we cannot know all of it, for each woman is the homemaker of a family.

The American Anti-Accident Association, with headquarters at Sharpsville, Pennsylvania, is an organization which is carrying on educational work aimed at the prevention of accidents. The Association has adopted a policy which calls for educational measures looking to the development of an informed public opinion. This policy includes twenty-four fundamental features, among them the following: "Advocation of consistent hygienic or sanitary science in our nation's educational, commercial and industrial, institutions," "Adoption of a sane and safe Fourth of July throughout the country," "Vigorous efforts to help reduce the present appalling number of fires in our forests, dwellings, commercial and industrial communities," "Advocacy of an economical State or National insurance system that will tender an assured and immediate compensation to injured employees and others hurt by accidents, and which will also be helpful in preventing accidents."

CONSTITUTION OF HOME ECONOMICS ASSOCIATION OF GREATER NEW YORK.

The Constitution of the Home Economics Association of Greater New York is printed for the suggestions it may give to other local societies which may be formed.

In view of the fact that a large number of workers in Home Economics, in New York are without organization, we, the undersigned, hereby associate ourselves as follows:

I

Name.

1. The Home Economics Association of Greater New York, (in affiliation with the American Home Economics Association).

II

Purpose.

1. To bring about closer co-operation among teachers and workers in Domestic Science, Domestic Art and allied fields, in order that more effective work may be done in improving the conditions and raising the standards of living.

2. Specifically the Association aims: (a) To hold conferences of its members and others interested. (b) To develop and strengthen the work of the schools in all matters affecting health and efficiency in the family and individual. (c) To demonstrate the vital interdependence of private and municipal housekeeping. (d) To educate public opinion by circulating literature, by meetings, by publications in the public press and elsewhere and to make advancement secure by municipal and legislative regulations.

III

Membership.

1. All interested persons who pay the annual fee.

IV

Officers.

1. The Officers shall consist of a President, Vice-Presidents, a Secretary-Treasurer and an Executive Committee.

2. The executive committee shall be composed of the President, First Vice-President, Secretary-Treasurer and four additional members elected at the annual meeting.

3. All officers shall be elected for one year at the annual meeting, and shall have the duties usually pertaining to such officers.

V

AMENDMENT.

This constitution may be amended at any meeting by a two-thirds vote, notice of the proposed change having been given ten (10) days in advance or by announcement of the fact at any regular meeting.

BY-LAWS.

ARTICLE I.

MEMBERSHIP.

There shall be three classes of membership:

1. Active, open to all interested who are approved by the Executive Committee and who pay the fees.

2. Associate membership, open to those who desire to affiliate with the work of the Association without taking an active part in it, and who pay the fees. This membership will be open to individuals and to clubs, societies, institutions, public officials and others.

3. Life membership may be secured by the payment of $25.00, approved by the Executive Committee.

Membership shall cease only upon written notice to the Secretary.

ARTICLE II.

MEETINGS.

The Annual Meeting shall be held on the second Saturday in January and shall be followed by the Annual Luncheon. The roll of membership shall be called at the Annual Meeting. Other meetings shall be held as the Executive Committee may appoint, or they may be called over the names of any fifteen members.

ARTICLE III.

FEE.

The Annual Fee shall be fifty cents ($.50) for active and associate members, but an extra assessment may be levied on active members, by vote of any meeting, to meet delegates expenses or other extraordinary expenditures, provided due notice is given in the call for the meeting and provided that the total amount of dues and assessments shall not exceed one dollar ($1.00) per year. The Fee shall be payable in advance at the Annual Meeting.

ARTICLE IV.

STANDING COMMITTEES.

The Standing Committees shall comprise the following:

1. Membership committee which shall endeavor to increase the membership.

2. Program Committee which shall plan the year's work including lectures and addresses and discussions on theses which concern the field of work of the Association.

3. Publicity and Literature Committee which shall furnish information to the public press and shall distribute literature.

Each of the Executive Committee shall be assigned to the Chairmanship of a suitable Standing Committee, by the President, and additional chairmen, as necessary, shall be appointed by the President. The Chairmen of the Committees shall then select the members of their committees.

Additional committees shall be elected or appointed, from time to time, as the Association shall direct.

ARTICLE V.

Election of Officers.

There shall be a Committee on Nominations of five members, elected at the Annual Meeting, to serve for a term of one year. This Committee shall receive suggestions of nominations up to two weeks before the Annual Meeting. It shall then prepare a list of not less than three nominations for each office, which shall be submitted by mail, to all members, one week in advance of the Annual Meeting. Election shall be by a majority of active members voting at the Annual Meeting. The voting shall be by ballot.

After the first meeting, the four members of the Executive Committee shall by their own vote, determine which one shall serve four years; which one three years; which one, two years; which one, one year. After the first year, one member of the Executive Committee shall be elected each year, for a term of four years.

ARTICLE VI.

Relation of this Association to the American Home Economics Association.

This Association shall co-operate with the American Home Economics Association in such ways as shall be defined by vote of the former. In accordance with the present Constitution of the American Home Economics Association, the Association of Greater New York will each year, at the Annual Meeting, elect for a term of one year, one or more Representative Councilors (according to the representation granted by the American Home Economics Association) who will represent this Association on the Council of the American Home Economics Association. The Secretary shall issue a statement of authority to act as such a Representative. It shall be the duty of the Representative Councilor to furnish the Journal of Home Economics with programs of the meetings of the Association and copies of all papers delivered which seem suitable for publication, to attend meetings of the American Council, and in other ways aid as medium of communication between the two Associations.

ARTICLE VII.

Quorum.

A Quorum shall consist of twenty-one active members.

ARTICLE VIII.

AMENDMENT.

The By-laws may be amended at any meeting regularly called by two-thirds vote of those present and voting, provided due notice is given in the call.

Domestic Arts in Missouri.

The philosopher of the *New York Evening Sun* writes this about home economics in the issue of January 4th, under the editorial caption, "The Domestic Arts in Missouri:"

"They had a meeting of the Missouri State Teachers' Association at Kansas City a few days ago, and upon the peace of their intellectual deliberations descended a terrible cave-man with a knotty club, in the form of Mr. Louis Theilman, a Superintendent of Schools in St. François county, shouting for less l'arnin' and better cooks, in the untutored phrase of his constituents in the pleasant town of Bonne Terre.

"'Once there was a proverb which said the way to reach a man's heart was through his stomach. That opinion appears to have changed Nowadays the proper way to reach a man's heart is supposed to be through a knowledge of the dead languages and 'Plutarch's Lives.' In many families it's regarded as a sign of inferiority for the girl of the home to know how to do things about the house—wash dishes, sew and cook.

"'The domestic arts are being shunned as degrading. It's all due to the fact that there is not enough public education along these lines.

"'If the practice of law had to be taught at home instead of at expensive colleges it would rank lower than cooking does right now.'

"'The real question is too deep and wide to take up here—whether the domestic arts have been really and forever displaced from the fireside, and should henceforward be taught in schools during the stated hours of study, or whether the masters of these arts should still have their chairs under the roof of the family home. Miles of paper, barrels of ink, a hundred sanatoriums full of cases of nervous prostration, a thousand dislocated jawbones—such are part of the inevitable price we must pay for settling this mighty question, if, indeed, it ever shall be settled. But Mr. Theilman voiced the average cave-man's sentiments—the average cave-man who is a merchant or a mechanic or a professional man or a "railroader" or a manufacturer or a clerk—which include a longing for a habit of mutual friendliness and common interest in the family circle, a preference for a little good meat with the salt of peace, over a table overspread from designs in a fashion paper and laden with good food spoiled in the cooking, a blind yearning toward a simplified and better balanced life. And so brutish are the instincts of the cave-man that he will even forego talking eternally about such an ideal state if only he can sometimes, even fitfully and with generous regard for the nobler intellectual arts, actually get his home comfort once in a while in whatever way his wife will give it to him."

BOOKS AND LITERATURE.

The Home Economics Movement, Isabel Bevier and Susannah Usher. Whitcomb and Barrows, publishers, Boston, 1906. Pp. 67. Price, $.75.

"If history be regarded just as the record of the past, it is hard to see any grounds for claiming that it should play any large role in the curriculum of elementary education," says Dr. John Dewey in *The Progressive Journal of Education*. Although he is speaking of the teaching of children and "The Home Economics Movement" is written for those of larger growth, he indicates quite exactly that which gives to the book its special value. He says further: "The past is the past and the dead may safely be left to bury its dead. There are too many urgent demands in the present, too many calls over the threshold of the future, to permit the child to become completely immersed in what is forever gone by. * * * Whatever history may be for the scientific historian, for the educator it must be an indirect sociology—a study of society which lays bare its process of becoming and its modes of organization." "The Home Economics Movement" is not "a mere record of the past" though it gives the history of the establishment of many institutions and courses which have played their part on the educational stage and have disappeared; it is instead, "indirect sociology," the story of how women of needs and problems very like our own, have been working out their educational salvation. It "lays bare the process of becoming" in the Home Economics Movement in such a way as to be helpful to those who are listening to the "calls over the threshold of the future." In the introduction there is an interesting account of woman's education in this country. The chapters which follow relate to "Home Economics in Agricultural Colleges and State Universities," "Cooking Schools" and "Home Economics in the Public Schools."—Caroline L. Hunt.

One Woman's Work for Farm Women. Jennie Buell. Pp. 78. Whitcomb & Barrows, Boston. Price 50 cents.

This is the story of the part taken by one woman in rural social movements. Mrs. Mary A. Mayo was known as "Mother Mayo" by hundreds of men and women in Michigan at a time when rural life offered many vicissitudes. She was educated in the public schools of Michigan and at the time of the great struggle for existence after the Civil War she began her married life in a little log house where the young people had everything to earn for themselves. She took part in the out-of-door life, and when it was necessary gave a "lift" at the barn, in the field, with the poultry or in the garden. In addition to her own household cares she became an advisor and helper among her neighbors. In all the difficulties of pioneer life Mr. and Mrs. Mayo laid aside each year something for travel and culture. The old school books were brought out and studied and with the first organization of the grange in that section Mr. and Mrs. Mayo became active leaders. Young people were gathered together in the neighborhood for a reading club. Later with the beginning of the Chautauqua

literary and scientific circle she began with her husband and neighbors the courses as laid out by the Chautauqua Institution. Everywhere she tried to arouse her neighbors from social, mental and moral inactivity. As her family cares lightened she came to the direct assistance of the supervisor of farmers' institutes, Mr. Kenyon L. Butterfield. Mrs. Mayo was employed to give addresses before institutes and from 1896 to 1900 she presided at the women's section of the state institute. Her long continued work in the grange both with the women and children had prepared the field and had given a skill in reaching her audiences which made her of unusual value in extension work. The story of Mrs. Mayo's life is an inspiration to everyone who would rouse the finer sensibilities of those born and bred in country homes. Her life and work offer an illuminating history of the re-making of the farm home life and of quickened mental development.—Martha Van Rensselaer.

Diets in Tuberculosis, Principles and Economics, by Noel D. Bardswell, M.D. and John E. Chapman, M.R.C.S. Oxford University Press, New York City. 1908. Pp. 183. Price $2.50, postpaid.

This is a report of work extending over seven years of investigation, chiefly in England. In this book the authors show that the knowledge of the diet to be used in tuberculosis, has kept pace in the last few years with the changed methods of the treatment of the disease.

The authors state clearly the principles upon which a dietary for the person afflicted with tuberculosis should be constructed. They recommend that the physiological diet (viz., the diet which contains the exact amount of carbon and nitrogen necessary to balance the amounts of these substances excreted for the individual in normal health and at rest) should first be ascertained, and that this should form the basis of the diet for the treatment. The amount of protein should then be increased 30% and the total value should be increased 30%. This represents a standard diet for the average consumptive man of 150 g. protein, 150 g. fat, 250 g. carbohydrates and about 3,000 calories. General directions for the arrangement of the dietary follow, and the nutritive and economic value of each food material receives consideration.

An interesting portion of the book is the discussion of the advantages and disadvantages of a meat free diet, which is concluded with a summary of the results of using each in sanatoriums. They recommend the use of the mixed diet with the use of a moderate amount of meat. "In the case of individuals with normal appetite and digestion, the meat of an ordinary mixed diet can be altogether replaced by pulses, but such an entirely meat free diet is, on several grounds, not entirely satisfactory, and should not be used unless very strict economy is essential."

The cost of the dietaries is taken up and definite suggestions in regard to a dietary for the poor are given, as well as recommendations for the dietary of the well-to-do. This should be a boon to settlement workers who have complained that the prescription of "milk and eggs" has usually been given with almost disregard to the fact that the patient cannot afford so expensive a diet. A table at the end of the book shows the composition of

four diets of different costs suitable for the treatment of the consumptive. The nutritive value of these closely accords with the standard recommended, ranging in total caloric value from 3400 to 3700, and the protein about 150 g. The table in part is as follows:

No. g. protein for one cent.	Total caloric value.	Cost per day (about).
6.6	3722	.23
7.7	3545	.20
8.6	3452	.18
9.7	3375	.15

Fully as valuable as their recommendations for the diet in tuberculosis is their discussion of economic dietaries. It is interesting to note that their investigations *led to* the observations in the economic dietaries. Such a knowledge of the economic value of foods is of advantage to the person in health as well as the person afflicted with tuberculosis. The careful manner in which this has been considered can best be stated by quoting the conclusion of the chapter discussing the economics of diets. "We are of the opinion that in a diet of the working classes, the amount spent upon animal food should not exceed 70% of the total expenditure. Our dietetic work at the Munsley Cottage Sanatorium showed us that to construct a really cheap and efficient dietary, it is necessary to make a reasonable use of vegetables as a source of protein."

The work detailed in the book has a wide application. It will be found of use to the patient as well as to the physician and to the householder as well as to the dietitian.—Ellen A. Huntington.

A Manual of Personal Hygiene: Proper Living upon a Physiological Basis. By American Authors, edited by Walter M. Pyle, A.M., M.D., Member of the American Ophthalmological Society; Fellow of the American Academy of Medicine, etc. Third edition revised and enlarged. Philadelphia and London. W. B. Saunders Company, 1907, 430 p. $1.50.

The first edition of Pyle's Personal Hygiene appeared in 1901, and since that date this book has been one of the particularly useful authorities upon this subject. This third edition contains some revision of the former text, additional chapters on home gymnastics and domestic science; an appendix describing the simpler methods of Hydrotherapy, Thermotherapy and Mechanotherapy; and a section giving first aid treatment of emergencies. This compendium, written by various authors, contains much useful information, but, as is apt to be the case with material grouped from different sources, the work lacks the unity, and continuity which are very desirable in the treatment of such a subject as hygiene.

The editor of the work, perhaps naturally, gives the most elaborate treatment to the hygiene of vision. This chapter, as well as some other chapters in the book, reflects the tendency of the specialist to magnify the importance of his own subject and to present his views in a way more technical and involved than is desirable for even a well educated lay reader. With the emphasis which is given to the hygiene of vision it is surprising and apparently quite inconsistent that the paper used in the

book should be a calendered paper, difficult to look at, particularly by artificial light.

Some of the chapters contain more anatomy and physiology than seems to be necessary for the real hygienic advice which is given. Some of the students of this subject of hygiene are rapidly becoming convinced that the effective presentation of hygienic instruction is not so much dependent upon the teaching or understanding of human anatomy and physiology as was formerly considered essential. The book in places becomes too technical and certain interesting aspects of hygiene are given scant, if any, attention. In the discussion of healthful exercises too much emphasis seems to be given to formal gymnastic movements and inadequate direction and advice is furnished regarding the various forms of games and outdoor activities which are suitable to individuals of different age and conditions of life.

After all has been said with reference to apparent defects, one may heartily commend the book as one containing many sound precepts and helpful suggestions for the hygienic life of the individual.—Thomas D. Wood.

Tuberculosis and Its Prevention, issued by the Massachusetts Board of Education, Boston.

This is a pamphlet of twenty-three pages giving practical suggestions to teachers regarding instruction as to tuberculosis and its prevention, and covers in outline form, the following topics: What tuberculosis is; history of tuberculosis; what tuberculosis does; how tuberculosis is spread; tuberculosis is preventable; how cured; early signs and symptoms of consumption; the campaign against consumption in Massachusetts; reference to standard works on the subject.

Medical Inspection, issued by the Massachusetts Board of Education, Boston.

This is another pamphlet giving suggestions to teachers and others in education positions regarding medical inspection which, in some thirty pages, gives the sort of information a teacher should have regarding diseases and their symptoms; care of the teeth; nervous troubles and some statements regarding school hygiene and proper school furniture. Wider circulation of booklets of this sort would have great usefulness. Departments of Education in other States and in the larger cities might well reprint these Massachusetts pamphlets. Women's clubs and local home economics associations may find it desirable to issue such pamphlets for local circulation. They should also consider the pamphlet publications of the Public Health League of Boston.

Bacteria in Relation to Country Life. Lipman. Macmillan, New York, 1908. 486 pages. Price $1.50.

This latest addition to the Rural Science Series, edited by Professor L. H. Bailey, is a very readable account of bacteria in their relation to everyday life and in particular to life and business in agricultural regions.

Part I is a general biological account of the structure and physiology of bacteria, giving the facts necessary to understanding the life and influence of these organisms. Part II deals with the bacteria of air and water, especially emphasizing the relation of water supply to health and giving much information concerning contamination, purification and examination of water. The next Part devotes three chapters to bacteria and sewage, and is especially interesting in its discussion of sewage-disposal. Parts IV and V discuss the bacteria in relation to soil fertility and the use of manures. Part VI and VII are concerned with bacteria in relation to milk, its products and other foods. Aside from the remarks in the general discussions, diseases with which most people associate bacteria, are left unmentioned. A startling exception on page 461 is the prominent head line reading "Diseases of Swine," but the chapter simply deals with fermented liquors.

The book is not as well adapted to beginners as are certain other books, notably those by Conn. A reader familiar with some of the earlier volumes of the Rural Science Series will miss the concrete application which has made many of the volumes attractive and practical. Principles and theories of bacterial life and action are well presented, but the concrete application to everyday country life needs further development. One illustration will make the reviewer's meaning clear: The chapters on sewage disposal are valuable for the sanitarian in charge of city sewage plants, but few people without access to other books would catch from the thirty pages on bacteria in sewage the important idea that bacterial purification is easily within the reach of the farmer. However, while the chapters on sewage are essentially most interesting to the city sanitarian, those on soil are much more practical as viewed from the country standpoint.

Many parts of the book will be useful for reference in connection with domestic science; but as a text-book it is not the best adapted to such courses, for the reason that there is too little direct application to the practical problems of home economics, and also because in many practical problems of home economics the yeasts and molds must be considered along with the bacteria, in fact are frequently more important. The book seems best adapted to colleges of agriculture and to readers who are already somewhat familiar with the principles of bacteriology and general chemistry.—Maurice A. Bigelow, Teachers College, Columbia University.

Vitality, Fasting and Nutrition, by Hereward Carrington. Introduction by A. Rabagliati. Rebman Co., New York. Pp. 648. Price $5.

This volume, together with Dr. Rabagliati's Air, Food and Exercise, raises important questions for the student of dietetics. It is very good for the seeker after truth to find other paths than those well trodden. It keeps alive the scientific spirit which holds a balance of serenity in the midst of opposing theories.

Fasting, as a curative and also a preventive measure, was strongly advocated by Dr. E. H. Dewey, and Dr. Robert Walter joined him in refusing to believe that food was the source of human energy. The

author says: "Now the stand I shall take is that food has but one function in the human economy, the replacement of tissue, and that it supplies no heat and no energy whatever; that vital force is in no wise inter-related, or transmutable, into any other forces whatever." His belief is that the body is like an electric motor, charged from without through the brain and nervous system, and in six hundred pages he gives examples to confirm his opinion.—E. H. R.

Food and Nutrition Laboratory Manual. Department of Household Science, Univ. of Illinois. By Isabel Bevier, Ph.M., and Susannah Usher. S.B. pp. 75. Revised Edition, 1908. Whitcomb & Barrows, Boston. Price 100.

This book contains an excellent collection of well-tried experiments on food of interest to the students of Home Economics. The aim, as stated in the introduction has been well carried out: "In the preparation of this laboratory guide the intention has not been to devise new and original experiments, but rather to select from the large body of experiments now offered in physiological chemistry those which in themselves, or in their applications, have a more or less direct bearing upon the principles governing the selection and preparation of food," The order—proteins, fats, carbohydrates, milk, meat, wheat, flour, bread, and digestion—may not appeal to all as best, but in using the book it is quite possible to modify the order. The use of the book as a text presupposes a knowledge of organic and analytical chemistry as well as a general knowledge of foods, but many experiments can be taken from the book and used by students with less training. It is especially valuable, perhaps, for ready reference.—Edna D. Day.

Art and Economy in Home Decoration, by Mabel Tuke Priestman. pp. 222. John Lane Company, New York. Price $1.50; Postpaid, $1.65.

This is a useful handbook and will appeal equally to those about to furnish a house, and to that larger class who are desirous of securing the best and most artistic effect with present possessions in the way of furniture. Miss Priestman has had considerable experience as an interior decorator and her book contains much helpful advice on "Color Schemes," "Treatment of Walls," and the "Choice and Arrangement of Furniture"; also on "What to Avoid" in the selection of rugs, portieres, bric-a-brac, and all the things that together go to the making of the "House Beautiful." The chapters on "Floor Staining," "Stencilling and Block Printing," and on "Homemade Rugs," are full of practical hints, and many readers will appreciate the chapter on "A Craftsman's Needlework." The book contains some good illustrations, together with suggestions on "How to Furnish a Cottage by the Sea, or a Suburban Home," and an interesting description of a house furnished and decorated by the united efforts of a talented family of craftsmen and women.—N. H.

A Sewing Course. By Mary Schenck Woolman, B.S., Professor of Domestic Art in Teachers College, Columbia University, and Director of the Manhattan Trade School for Girls; 136 pages octavo, illustrated, price $1.50 net; interleaved, $3.50 net. Published by Frederick A. Fernald, 217 West Utica Street, Buffalo, N. Y.

The fourth edition of this book, which has long had a field or great usefulness, was issued in the fall of 1908. It is primariyl of interest to teachers and to be used by them in training-schools where time does not permit the making of many applications of stitches. The writer makes it plain that, under no circumstances, should the subject be presented to children in this manner. The new edition contains many additional features, especially in relation to the teaching of the subject, and this makes it of great value to the teacher of sewing who aims to have her work broader than the old-time method of individual attention to the little child spending hours trying to produce fine stitches on uninteresting scraps of cloth or samplers.—Anna M. Cooley.

The Structure of the Wool Fiber and Its Relation to the Use of Wool for Technical Purposes, by F. H. Bowman, D.Sc., Member of the Society of Chemical Industry, etc., published by the Macmillan Company, New York. Price $2.50.

This exhaustive study of the wool fiber is an excellent book of reference for the textile teacher. Like the author's work on cotton, it deals only with the raw material. The most interesting chapters are: The Mechanical Structure and Composition of Wool; Action of Reagents on Wool; Methods of Analysis and Detection of Various Fibers. The illustrations, many of them colored, are very clear. The book is the most complete work published in England on the subject.—Nellie Crooks.

"The Heritage of Dress" by W. M. Webb. Being notes on the History and Evolution of Clothes with Eleven Plates and 169 Figures in the Text. Published by E. Grant Richards, London, 1907.

The Origin of Dress, Development of the Modern Coat, Buttons as Chronicles, Collars and Bands, are a few of the interesting headings which are treated in the various chapters. It is a most comprehensive work and is more than a book of reference for quaint customs and traditions.—Aletta V. W. Schenck.

The Domestic Art Review. Teachers College, Columbia University, New York City.

This is a quarterly magazine published by students in the Domestic Art Department of Teachers College. The first number, which appeared in November, 1908, contains an article on *Domestic Art in the Elementary School* by Anna M. Cooley, B.S., Instructor in Teachers College, Columbia University, which after discussing the theory of teaching Domestic Art in the elementary school, presents an outline of such work through the eight grades.

The Laundry. Sanitation Series. The Cornell Reading Course for Farmers' Wives, Flora Rose. pp. 80. New York State College of Agriculture, Ithaca, N. Y. 1909.

This pamphlet prepared for free distribution presents a discussion of Fabrics, and Methods, and descriptions of Laundry Machinery in a clear, comprehensive manner. The book contains illustrations of cotton and linen fibres, types of laundry irons, and shows two pictures, one of the

rural soap-maker, and the other, the modern laundry equipment. The latter picture shows hand machinery of a simple, mechanical type, easily understood by the housewife. The arrangement of material is well planned, starting with explanations of the fabrics, the reason for certain methods of washing and the good and bad results from different chemicals in connection with the washing of these fabrics. Then follows a more detailed account of soaps, water, starch, bluing, as well as several solvents and reagents. The chapter on stains does not give any new knowledge, except, perhaps, to people who have made no study of laundry methods. The classification of the stains has been made according to solvents instead of according to the stains which would prove a more useful arrangement were one in a hurry, or looking, perhaps with hands wet from the wash tub. Few housekeepers know enough of solvents to find the remedy for the stain by looking for the solvent of such a stain.

Taken as a whole, the pamphlet is an easy, simple explanation of methods, apparatus and agents, and will be of great assistance to any housewife.—L. Ray Balderston.

Reports of the President's Homes Commission, Message from the President of the United States transmitting reports, etc. * * * 60th Congress, 2d Session, Senate Document No. 644, Washington, D.C., 1909. Pp. 381.

This Report is the result of a Commission appointed by President Roosevelt, of which Gen. George M. Sternberg was Chairman, to consider the improvement of living conditions in the District of Columbia. It comprises (besides the general report and recommendations of the Commission) the findings of two of its committees; the committee on Improvement of Existing Houses and Elimination of Alley Houses, of which William H. Baldwin was Chairman; and the Committee on Social Betterment, of which Dr. George M. Kober was Chairman. The work of these two committees, and especially the second, has brought together a wealth of reliable data, which ought to be spread broadcast through the country. The report of Dr. Kober's Committee on Social Betterment (pp. 27–38) makes up the bulk of the report and is comprised in three parts: Industrial Hygiene (pp. 29–107) Social Betterment (pp. 109–322) and the Appendices.

In the section on Industrial Hygiene, there is a thorough consideration of the relation of daily occupation to health. Successive chapters treat of the occupations which incur special risk, including those in which the workers are exposed to irritating dust, infective matter in dust, poisonous dust, irritating or poisonous gases, organic gases, exposure to extremes of heat, constrained attitudes, over-exercise and exposure to machinery. Other chapters treat of the employment of women and children, special measures for the prevention of tuberculosis, measures for the protection of wage earners, including the responsibility of the Government, the employer, the general public and the employeé himself. The division of the Report devoted to Social Betterment, includes the following chapters: Chap. I.—How to keep well and capacitated for work; Chap. II.—Ali-

mentation and foods; Chap. III.—The causes and prevention of infectious diseases; Chap. IV.—Infantile mortality; Chap. V.—The prevention of permanent disabilities in children; Chap. VI.—The health of the city of Washington; Chap. VII.—Sexual hygiene and prophylaxis; Chap. VIII.—The tobacco habit; Chap. IX.—The alcohol question; Chap. X.—The drug habit; Chap. XI.—Sociological study of 1,251 families; Chap. XII.—The business relations of wage-earners; Chap. XIII.—The scale of wages and the cost of living; Chap. XVI.—Supression of usury; Chap. XV.—How to benefit the poor in the slums.

This Report has been called by some one "For the topics it covers, the best textbook in the field for home economics teaching." Certainly it gives in compact form, what one would search many books for, besides presenting much new material. Teachers of home economics, and other persons thoughtful for home betterment, should write to their United States Senators for this Report.—B. R. A.

Report of the Country Life Commission, U. S. Senate Document No. 705, 60th Congress, Second Session, 65 pp.

Pres. Roosevelt's special message to Congress and this Report have been amply reviewed in the newspapers and magazines. Under the heading *Need of a Redirected Education* the following is significant: "The subject of paramount importance in our correspondence and in the hearings is education. In every part of the United States there seems to be one mind, on the part of those capable of judging, on the necessity of redirecting the rural schools. There is no such unanimity on any other subject. It is remarkable with what similarity of phrase the subject has been discussed in all parts of the country before the commission. Everywhere there is a demand that education have relation to living, that the schools should express the daily life, and that in the rural districts they should educate by means of agriculture and country life subjects. It is recognized that all difficulties resolve themselves in the end into a question of education." * * * "The real needs of the people are not alone the arts by which they make a living, but the whole range of their customary activities. As the home is the center of our civilization, so the home subjects should be the center of every school."

Under the heading *Woman's Work on the Farm;* "There is the most imperative need that domestic, household, and health questions be taught in all schools. The home may well be made the center of rural school teaching." Well said! The whole report will repay careful reading. It may be obtained of your Senator if the supply is not exhausted.—M. LeBosquet.

MEMBERS OF THE AMERICAN HOME ECONOMICS ASSOCIATION.

SUPPLEMENTARY LIST.

The following list of names contains the names of about one hundred persons whose names should have appeared as original members in the February Journal. A package of cards containing their names was lost in the mail and this accounts for the omission. The list also includes persons who have joined the Association since the February number of the Journal appeared. It seems right to consider all of these persons as original members of the American Home Economics Association.

TEACHERS OF COOKING IN NEW YORK CITY.

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